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ENDOMETRIOSIS*

With Particular Reference To Conservative Treatment

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ENDOMETRIOSIS is a relatively frequent finding of the pathologist at autopsy and during the examination of the surgically removed uterus and adnexa. In spite of the clinical interest in this subject since Sampson's original work, a preoperative diagnosis is rarely made, its presence may not be recognized at the time of operation, and the end results of radical and conservative treatment are too little known. While there have been many reports in the literature since Sampson's[39, 40] articles of 1921-2, most of the discussions on this subject have been concerned with the origin and mode of transmission of this lesion and few papers have appeared dealing with the end results following surgical treatment. Only by the addition of further groups of cases to the literature can a true appreciation of the importance and clinical nature of endometriosis be obtained. Certainly there is every evidence that the lesion is much more common than was previously suspected. We wish to present a brief résumé of the literature and to report forty-three cases observed at the Lahey Clinic together with the end results of treatment.

Endometriosis is an abnormal growth of endometrial tissue in an alien location. This term was adopted by Sampson to avoid the confusion of terms which had been used in the literature. The terms adenomyoma, adenomyosis, chocolate cyst, hemorrhagic perforating cyst, menstruating cyst, and others have since been abandoned as misleading or incomplete. The use of the term endometriosis implies, as Graves[13] suggests, an acceptance of Sampson's theories of etiology. The tumor manifestations of this disease are expressed by the word endometrioma, first mentioned by Blair Bell[2] in 1922.

Von Rokitansky[38] in 1860 described adenomyoma as a pathological entity for the first time. Between 1893 and 1896 von Recklinghausen[37] published a series of articles ascribing the origin of these tumors to the development of rests in the wolffian ducts. Cullen[5], in 1896, made the first mention of an adenomyoma of the round ligament and since that time he has added considerable knowledge to the general subject. Russell, in 1899, first described endometrial tissue in the ovary. Pick[35], in 1905, described four cases of what he called "adenoma endometrioides ovarii" and his description of endometrial tissue in the ovary has not been improved upon. He believed that the extrauterine growth arose from Gartner's ducts and the paroophoron. Blair Bell[2], Fletcher, Shaw[53], and Donald[12] presented early reports from England while Norris, Casler, Schwarz[50, 51], and Cullen[5, 11] reported early cases in this country. Previous to 1921, when Sampson made his original report covering twenty-three cases, less than twenty instances can be found in the literature. Janney[17] reported a series of observations made previous to the publication of Sampson's work but these were published later. Meyer first published his serosal theory in 1919. He believed that the germinal epithelium of the surface of the ovary retains its embryonal stage potentialities of growth and may differentiate into endometrial-like tissues. Novak[31] accepted this explanation and believed that dissemination through the peritoneal cavity arises from that point. It has been the observation of several writers that the celomic epithelium creates endometrial-like tissue by a process of metaplasia and Sampson, in later publications, does not deny this possibility. Sampson[39, 40], however, was the first to advance the theory that the endometrial-like tissue found in ovarian substance was not a metaplastic change from embryonic remains but represented true endometrial tissue which had been regurgitated through the fallopian tubes in the menstrual blood and become implanted in the ovaries. While it is true that Sampson's theories may not account for all the endometrial-like tissue in the abdomen and pelvis, his theories have not been disproved, and we feel that when true aberrant endometrial tissue is encountered, its presence can be explained by his theory. For a more complete résumé of the literature one should refer to the excellent discussion by Graves[13].

It has been difficult to determine the incidence of endometriosis. Sampson had reported 188 cases up to 1929. While doing 296 pelvic operations he found the lesion sixty-four times or in approximately 22 per cent. In the same year Smith[55] reported 159 cases observed at the Free

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Hospital for Women while Keene and Kimbrough[21] in 1930 reported 118 cases. In the past five years we encountered the lesion in forty-three patients during which time over 400 hysterectomies were done. From these observations endometriosis must be considered a relatively common lesion.

The age incidence of endometriosis closely parallels the age incidence of menstruation. The youngest patient in our series was twenty-two years, while the oldest was sixty-two years; the

FIGURE 1. Ovarian endometriosis.
Mrs. C. K., aged thirty-three, married for six years with no pregnancies. Five years previously suspension and appendectomy had been performed. At operation there were dense adhesions in the pelvis with multiple chocolate cysts involving both tubes and ovaries. She had been well four years since operation.

average age incidence was 37.1 years. Smith[55] reports an age variation of twenty-three to seventy-two years with the majority occurring between thirty and fifty years. Keene and Kimbrough[21] report age limits of twenty-two to sixty years with only two beyond the menopause. In an early series of forty-nine cases Sampson[59, 49] found four cases under thirty (8 per cent) but in our series ten or (23 per cent) were under thirty years of age. Twenty-seven of our patients were married and sixteen were single. Of the married group, fifteen had borne an average of 3.2 children. In the remaining twelve, one had been married but two months; another had had one miscarriage in three years of married life, and ten had not had children. This gives a sterility index of forty per cent. Nine of these sterile cases had ovarian endometriosis, while one had a rectovaginal lesion. Smith's[55] sterility index was 20.6 per cent and Keene and Kimbrough[21] found 40.9 per cent sterile.

Cases have now been reported showing endometriomata in all pelvic organs and in many other localities. The ovary is the most common site, and in our series twenty-six cases showed ovarian implants, 40 per cent of these being bilateral. Graves[13] reports a bilateral involvement of the ovaries in 30 per cent. The uterus is the next most common site; nine of our cases showed lesions in the wall of or on the surface of this organ. Rectovaginal endometriosis is less common but in the presence of bowel obstruction it is important to differentiate this condition and carcinoma of the rectum. There were four patients in this group, two of whom had bowel obstruction. We believe that all obstructive lesions in the rectum must be considered malignant until proved otherwise. However, with no history of bleeding or mucus in the stools and with a normal appearance of the mucosa at the site of the obstruction on proctoscopic examination, one must suspect that the lesion may be endometriosis. The round ligament, intestinal wall, fallopian tube, abdominal scar, appendix, and the peritoneum were the sites of the lesion in our other cases. Endometriomata have been reported also in the groin, bladder, umbilicus, omentum, vulva, perineum and vagina.

The duration of symptoms in our series varied from thirty-six hours to ten years. Acquired dysmenorrhea, pelvic and lower abdominal pain, abnormal menstruation, backache, leucorrhea and lower abdominal tumor, named in the order of frequency, were the principal complaints in our group. Keene and Kimbrough[21] add to this group bladder or rectal pain, associated with menstruation, as being a frequent symptom. They point out that the abnormal bleeding may be due to the associated

FIGURE 2. Adenomyoma of the uterus.
Miss E. P., aged thirty-five, had had menorrhagia for three months. Pelvic examination showed moderate irregular and nodular enlargement of the uterus. This illustration shows the distribution of the adenomyoma in the uterine wall.

lesions which are frequently found. We feel that this fact should be kept in mind in considering most of the complaints of these patients who have endometriosis. Other symptoms are associated with lesions in particular localities. As already mentioned, the rectovaginal group is particularly important, because symptoms of intestinal obstruction may occur. Graves[13] and Sampson[39, 49] and more recently Meigs[28, 29] have reported interesting cases of this nature. Ovarian endometriosis may simulate salpingitis or appendicitis. Lesions of the round ligaments usually present tumors near the external ring which show tenderness and swelling at the time of menstruation. Endometriomata may appear as tender nodules in the groin, or perineum or vulva. Bladder endometriosis may be mistaken for malignancy. Keene[19] in 1925 reported the first case of this nature. Some of the most interesting cases of endometriosis have been transplants in abdominal wounds. These lesions are usually soft, dark-colored tumors which become engorged and painful at the time of menstruation, or there may be actually menstruating sinuses. Meigs'[29] case four in his 1930 series was most interesting. It presented a menstruating sinus which had apparently been caused by the transplantation of endometrial tissue during ventral fixation of the uterus. Endometrial tissues in the appendix may cause symptoms suggestive of appendicitis. Outerbridge[33] in 1917 and 1925 reported cases of this nature.

FIGURE 3. Adenomyoma. High power magnification of the same case as figure 2.

Physical examination of these patients is usually not characteristic in most cases. However, if the lesion is in the umbilicus, round ligament, perineum or abdominal scar the findings may be quite obvious when the symptoms are associated with menstruation.

A preoperative diagnosis of endometriosis is seldom made; three such cases were recognized before operation in our series and several more had this tentative diagnosis; one was an obvious lesion of the round ligament while the other two caused obstruction of the sigmoid at the time of menstruation. Smith[55] in his series of 159 cases reports that endometriosis was considered in about twenty instances. Shirer[54] made no preoperative diagnosis in thirty patients observed. Ovarian endometriosis will always be difficult to differentiate from chronic pelvic inflammation. Graves[13] states that when the posterior cul-de-sac and rectal wall are involved, there is a peculiar, puckered, nontender, induration which an experienced examiner can at times differentiate from a posterior parametritis. We feel that with an increasing realization of the frequency of endometriosis and with a better knowledge of its clinical manifestations the condition will more often be suspected previous to operation. Such symptoms as abnormal menstruation, sterility, acquired dysmenorrhea, and lower abdominal pain should make one consider endometriosis particularly when associated with a fibroid uterus and malpositions of the uterus.

FIGURE 4. Endometriosis of the round ligament.
Mrs. B. W., aged thirty-nine, had one pregnancy during nineteen years of married life. A lump had been noted in the right groin for nine years, changing in size during menstruation. Low power magnification.

There is a very high incidence of associated lesions with endometriosis. Some observers have thought that an enlarged uterus may be instrumental in producing the backwash of menstrual blood through the tubes. Adhesions and abnormal positions of the fundus were most common in our series, occurring in seventy per cent of the cases. Fibroid uterus was next common,

occurring in forty-nine per cent. Much less commonly were found chronic salpingitis (diagnosed microscopically) twenty per cent, and simple ovarian cysts, fifteen per cent. Two cases of fibrosarcoma of the ovary were found in our series although they had no association with endometrial tissue. We did have, however, one case of bilateral ovarian endometriosis with an adenocarcinoma arising from the endometrial tissue. Sampson found endometrial tissue in seven of sixteen cases of carcinoma of the ovary. Smith[55] found malignancy in seven per cent of his cases of endometriosis and believes that these implants may undergo malignant degeneration.

The pathology of endometriosis varies somewhat with the locality involved, but the lesion

FIGURE 5. Higher power magnification of endometrioma of round ligament.

itself is usually quite characteristic. In the ovary the so-called "chocolate cyst" is typical. These vary from small spots on the surface of the ovary to quite sizable cysts of fifteen to twenty centimeters in diameter. In 30 to 50 per cent of the cases, the cysts are bilateral. They may lie on the surface of the ovary or deep in its substance and may be multiple in the same ovary. They may take up the entire structure of the ovary. The cysts are lined with a low cuboidal epithelium and are surrounded with stroma resembling that of endometrium of the uterus with similar glands and tubules. This tissue undergoes the same changes as occur in the endometrium of the uterus during menstruation. There is a discharge of blood and desquamated cells into the cavity of the cyst, similar to that into the cavity of the uterus. Here, however, there is no outlet for the blood, and it may be retained in the cavity of the cyst or may rupture through the capsule into the abdominal cavity. The retention of blood in these cysts gives the characteristic chocolate or tarry content. The discharged blood creates a reaction in the surrounding peritoneum which is responsible for the multiple, firm, tenacious, adhesions so commonly found associated in the pelvis in these cases. Further endometriomata may be found in these adhesions themselves, or may be spread in this manner to other structures. At times, the entire pelvis will be found to consist of one conglomerate mass of firm adhesions and endometriomata. Graves[13] mentions the frequency, with which, in these cases of extensive adhesions, the tubes are free from involvement, and this agrees with our experience. He feels that this is an important differential point from inflammatory lesions of the pelvis. Although twenty per cent of our patients showed chronic salpingitis on microscopical study, we did not feel that the tubes in the majority of the cases were abnormal at the time of operation.

When we consider our cases of "Chocolate Cysts", that did not show endometrial tissue on section, we are faced with several possibilities. Endometrial tissue may have been present and not found, but as we review the literature and find that most every observer has had similar experiences, we do not believe that this is so in all instances. Some may be corpus luteal cysts with hemorrhage. Some may be occlusions from the germinal epithelium and due to the influence of the ovarian hormone, undergo endometrial-like changes. They may be simple cyst-adenomata of the ovaries with hemorrhage. MacCarty[27] emphasizes the black or tarry appearance of the latter, rather than the chocolate-colored content of the endometrial cyst. There seems to be no doubt that all hemorrhagic cysts of the ovaries are not necessarily endometrial in origin. This fact should be remembered when treatment is being considered.

Adenomyomata of the body of the uterus closely resemble ordinary fibroids. They, however, are not definitely circumscribed and cannot be easily shelled out of their surrounding structures. They are usually found near the uterine horns or on the posterior wall of the fundus, but they may be in any position where ordinary fibroids occur. They are made up of coarse, fibrillary, fibromyomatous tissue which merge with the uterine wall. Within are glandular elements which may become filled with blood and many resemble chocolate cysts. They are usually small and seldom are they recognized at operation.

Rectovaginal endometriosis is usually first noted as a smooth hard lesion just behind the cervix. As it grows, it gradually involves the anterior rectal wall and may go on to the stage of obstruction. The lesion may involve the vagina early in its course and the diagnosis can be established by biopsy.

The treatment of endometriosis depends on the location and the extent of the lesion, the age, and general physical condition of the patient. Complete involvement of the ovaries and the necessity for castration have been rare in our experience. Three of our patients have had children following the removal of one ovary for endometriosis. Of four patients treated conservatively by Wharton[56], three subsequently bore children. Keene and Kimbrough found that twenty-eight per cent of their patients treated conservatively later had normal pregnancies. The removal of all ovarian tissue in young women is a very serious matter and we do not feel that it is warranted in this disease where local excision can be performed. In women over forty years of age supravaginal hysterectomy with removal of tubes and ovaries is indicated. In poor risk patients, it is to be remembered that castration will cause the lesion to recede and usually relieve symptoms. In this group, the production of an artificial menopause through the use of Roentgen therapy should be considered.

In the rectovaginal group, where intestinal obstruction has not occurred, the disease can be relieved by local excision followed by the production of an artificial menopause. Where intestinal obstruction has occurred, the obstruction must first be relieved by colostomy. This colostomy should be done in such a manner that it can later be closed, since following the removal of the ovaries the lesion will regress and the obstruction will be relieved.

In bladder endometriosis, the production of an artificial menopause will cause the lesion to disappear. In endometrial tissue of the appendix, the removal of that organ will remove all trouble. Local excision will usually cure other types of endometriosis.

In the accompanying table, we have recorded our end results in this group of cases, as well as those of several other observers. We have divided them into two groups; those treated radically, that is by castration; and those treated conservatively where all ovarian tissue had not been removed. The average age of our seventeen cases treated radically was 41.5 years. The average age of the conservative group was 29.2 years. The average follow-up in both groups was approximately 2.5 years. In our group, treated by bilateral removal of the ovaries, all were cured. In the conservative group, two of our patients were improved, while the remainder were relieved. One patient still has nodules at the apex of the vagina, and has occasional lower abdominal pain. She prefers this situation, to castration, since she plans marriage. Another patient has had a biopsy of a small rectovaginal lesion and is now receiving Roentgen therapy. There were no cases in either group unimproved and there was no operative mortality.

	Radical							Conservative					
Observer	No. Cases	No. Cases	Cured	Imp.	Not. Imp.	Ave. FU	Ave. Age	No. Cases	Cured	Imp.	Not. Imp.	Ave. FU	Ave. Age
Lahey Clinic	43	22	100%	0%	0%	2.2 yr.	41.5 yr.	21	90%	10%	0%	3.0 yr.	29.2 yr.
Wharton[56]	13	9	100%	0%	0%	3 yrs.		4	75%	0%	25%	3 yrs.	
Read and Roques[38]	41		86%	9%	5%				71%	20%	9%		
Keene and Kimbrough[21]	118	60	98.3%	(1 death)				48	95.8%	4.2%	0%		
Smith[55]	159		100%	0%	0%				67.5%	32.5%	0%	(2nd op. in 9.3%)	

SUMMARY

A series of forty-three cases of endometriosis are reported together with a brief résumé of the literature. The incidence, location and symptomatology are presented.

A preoperative diagnosis of endometriosis is seldom made but the lesion should be suspected in the presence of abnormal menstruation, sterility, acquired dysmenorrhea, and abnormal pelvic findings. The lesion is much more frequently recognized than formerly.

We wish to emphasize the importance of conservative treatment of endometriosis during the active child-bearing period. Three patients in this series having ovarian endometriosis following removal of one ovary subsequently had children.

The end results after both conservative and radical treatment are satisfactory in properly selected cases.

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HUTCHINSON-BOECK'S DISEASE (GENERALIZED "SARCOIDOSIS")*

Historical Note and Report of a Case With Apparent Cure

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"Names are good servants but bad masters."
(Jonathan Hutchinson)

IN presenting the following communication the author has two objects, that of clarifying a minor point of medical history, and that of again drawing the attention of the practitioner to a rare but most interesting pathologic entity. In its history this malady not only reveals the scant attention often paid by investigators to prior observations in the literature, but illustrates the disadvantages of multiple designations for a single disease and of a too rigid specialism in medicine; the latter is exemplified by the fact that after Caesar Boeck's paper (which gave the name to the disease) thirty-five years elapsed before any concerted attempt was made to correlate the known data on this morbid condition. That the patient whose case history is to be presented regained his normal health, though of no little interest, is possibly of less importance than that he suffered from an affection observed for the first time sixty years

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ago by Hutchinson, reported as involving the internal organs twenty years ago, by Kuznitzky and Bittorf, and whose protean manifestations are even now scarcely recognized.

As a number of investigators (such as Boeck, Besnier, Tenneson, and Hutchinson) have been eponymically associated with the condition commonly called "sarcoid", it seemed possible that a careful re-reading of the early papers on the subject might bring to light new facts of historical interest. This conjecture proved to be correct. In the course of the inquiry it soon became obvious that Jonathan Hutchinson, fourteen years before Besnier and twenty-four years before Boeck, had specifically called the attention of practitioners and dermatologists to the skin manifestations of the malady. His name, to most physicians, connotes only the characteristic teeth seen in congenital syphilis; but, his unflagging curiosity, his keen powers of observation, and his passion for intelligent notetaking stimulated him to write voluminously on many other subjects. "His *Archives of Surgery* (1889-1899) consisted of ten volumes,* issued in periodic form, the entire contents written by himself, forming a great storehouse of original observations on disease, which will some day be studied like the works of John Hunter."[1] Accordingly, a certain amount of attention will be devoted to him and to his relations with Caesar Boeck in order that the reasons for believing him to be the first to describe "sarcoid" may be made clear. Those authors who later drew attention to the involvement of the internal organs by the same pathologic process will be considered very briefly, since several reviews of the literature accompanied by adequate bibliographies have already appeared in print.

HISTORICAL

Jonathan Hutchinson, as early as 1869, observed a patient with peculiar purplish, raised lesions on the front of the legs, on the fingers, and on one forearm, which were irregular in size and shape, possessed sharp margins and smooth surfaces, and were neither tender nor painful. Associated with this there was brawny edematous swelling of one finger. In his *Illustrations of Clinical Surgery* (1875) Hutchinson[2] described the case in detail, published a chromolithograph of the patient's hand, and after a year's observation remarked that medicine of various sorts had had no effect on the lesions. He further stated: "During a visit to Christiania in the summer of 1869, Dr. Bidenkap was kind enough to show me the collection of pathological drawings in the University Museum, and amongst these was one taken from a patient of Professor Boeck, showing a precisely similar condition of things to that delineated in my portrait. The only particulars that I could ascertain were that it was from the hand of a Swedish sailor, who appeared to be in good health, and who was not known to have suffered from gout. Professor Boeck told me that it was the only example of its kind that he had ever seen."

When one recalls that this "skin" affection has been honorifically termed "Boeck's Disease", the above statement at first glance suggests that Caesar Boeck knew of Hutchinson's early case and deliberately failed to mention it when he wrote his own paper twenty-four years later. But if one pays due regard to the dates and to the ages of the individuals concerned, this cannot be true. The Professor Boeck mentioned here by Hutchinson must have been Carl William Boeck (1808-1875), an acknowledged authority on syphilis and Caesar Boeck's[3] uncle.

Moreover, in 1889, ten years before Caesar Boeck's important contribution, Besnier[4] described a lesion of the skin to which he gave the name *lupus pernio* ("chilblain lupus"). Although acknowledging that his case was similar to the one delineated by Hutchinson (? 1875), he thought the two were not completely identical. He portrayed, however, involvement of the nose and face, and noted for the second time what he termed *"synovites fongueuses"* of the fingers. In 1892 Tenneson[5] reported a similar case, but added nothing essentially new to the description of the disease except that the lobes of the ears might be affected. Three years after Tenneson's paper, Besnier published his *Musée de la Hôpital Saint-Louis*[6] and included in it colored lithographic reproductions of the lesions of the nose and fingers; these plates, however, did not materially improve upon Hutchinson's lithograph of twenty years before.

In the meanwhile, the Dr. Bidenkap mentioned above had succeeded Professor William Boeck in the professorial chair at Christiania and had, in turn, been followed by Caesar Boeck. It was, therefore, as a professor that the younger Boeck, in 1899, described for the first time[7, 8] the morbid histology of the skin. His paper was published first in Norway, and, with minor changes, a few weeks later in this country. In regard to the earlier reports in the literature he remarked: "The only clinical description known to me which bears any resemblance to my case is given in a recent paper by Jonathan Hutchinson in his *Archives of Surgery*, October 1898[9]. I dare not say that the skin affection there described as 'Mortimer's Malady'* is identical with my case, since the latter shows some very marked clinical features not found in Mortimer's disease, and since Mr.

*The series ran from 1889 to 1900 and consisted of eleven volumes, the last of which was not completed and sent to the subscribers until 1910.

*Hutchinson frequently called new syndromes or diseases by the name of the patient—in this case Mortimer—". . . although other and more scientific names might be devised, it is perhaps doubtful whether they would be more convenient." [10]

Hutchinson has had no opportunity to examine his cases histologically. Nevertheless, I am inclined to believe that they are only variant types of the same group of diseases and perhaps, later on, may be found to represent benign forms of so-called pseudoleucemic affections of the skin." We must assume, therefore, that Boeck did not regard the cases reported by Besnier and Tenneson as similar to his own.

One might wonder, at this point, why Hutchinson had not investigated more thoroughly these two patients with "Mortimer's Malady", for he had presented one of them to the Dermatological Society of London about 1894. In respect to this, however, he writes: "The general opinion was, I believe, that the disease was sarcoma, and it was strongly urged that portions should be removed for microscopic examination. This was subsequently suggested to the patient, and with the result that I did not see her again for two years."[9] This statement, apparently, explains his "lack of opportunity to examine his cases histologically". It is probable that he did not dare suggest a biopsy to the second patient.

It now appears that Hutchinson not only enjoyed the friendship of Professor William Boeck but was acquainted as well with the nephew Caesar, for he, Hutchinson, was president of the Dermatological Congress of London in 1896[11]. At this meeting Caesar Boeck, as vice-president for Norway, presided over one of the sections, and at the gala banquet responded to a toast. Doubtless, too, Boeck attended the garden party at Haslemere* given to the members of the Congress by Hutchinson and his daughter. So when, in 1898, Hutchinson[12] referred to a recent visit of his "esteemed friend, Professor Boeck of Christiania", obviously from the date, the latter could have been none other than Caesar Boeck, since the uncle had died in 1875. From this one might assume that the younger Boeck knew of Hutchinson's visit in 1869 to his uncle and of their discussion of their similar cases. But since there is no suggestion in Hutchinson's writings that he considered his own case of 1875 as one of either "Mortimer's Malady"[9, 13] or of "Mabey's Malady",**[10] the likelihood that Caesar Boeck was entirely unacquainted with it,—the first to be reported in the literature,—seems most probable.

The next important contributions came from the roentgenologists. As early as 1902 Kienbock[14] noted on x-ray examination curious "cysts" in the digits and toes of a twenty-seven year old patient who had acquired syphilis five years previously; but in those early days of roentgenology he attributed the findings to lues. Kreibich[15] in 1904 definitely associated these roentgenologic lesions with *lupus pernio*; but, in ignorance of this, Remijnse[16] in 1907 reported a case of "dactylitis syphilitica" accompanied by generalized lymphadenopathy in a patient who gave no definite evidence of congenital or acquired lues and who showed no lesions on the skin. The excellent skiagrams of the osseous changes which he reproduced in his paper would now be considered quite characteristic of "sarcoid". In a paper published in 1910 Rieder[17] re-described the roentgenologic appearance of the phalanges in two of his patients, and again observed that each one had active *lupus pernio*. Thus a decade passed with no important contributions other than descriptions of the bony lesions.

Five more years elapsed before involvement of the internal organs was noted. In 1915, Kuznitzky and Bittorf[18] reported a case of skin "sarcoid" with evidence of morbid changes in certain of the viscera. A biopsy of the skin showed the histologic pathology previously pictured by Boeck, but in addition, the patient exhibited lymphadenopathy and splenomegaly, the blood examination revealed a leukopenia and eosinophilia, and mottled infiltration of the lungs with some enlargement of the hilus glands was demonstrated by the x-ray. Schaumann[19], in 1917, in describing the microscopic appearance of the lymph glands and later[20] of the osseous lesions, identified *lupus pernio* and Boeck's sarcoid as one and the same disease. Finally Jüngling[21] (1919) not only again described the "cystic" appearance of the phalanges seen on x-ray examination, but biopsied the soft tissues of one finger, found the characteristic microscopic changes described by Boeck, and gave to the bony deformations demonstrated by the x-ray the term "ostitis tuberculosa multiplex cystica".

Scattered papers depicting either the clinical or histological changes in the lymph glands or internal organs began to appear in print during the next ten years. Rischin[22], Bernstein[23], Goeckerman[24, 25], Bernstein, Konzlemann and Sidlick[26], Doub and Menagh[27] all contributed pertinent observations. Between 1931 and 1934 other cases with visceral involvement were recorded by Kirklin and Morton[28], Funk[29], Bayer[30], Bergel and Scharff[31] and Sannicandro[32]. In 1932 an important monograph was published by Kissmeyer[33] which summarized the previous contributions to our knowledge of the disease and included many original observations of his own. In May of 1934, the *Réunion Dermatologique de Strasbourg*[34] devoted itself entirely to the consideration of "sarcoid". This symposium brought out a number of unique aspects of the malady, papers being contributed by dermatologists, internists, pathologists and roentgenologists from Germany, Switzerland, France, Sweden and Denmark. At this meeting

*For a delightful description of Hutchinson's country home see the article by William Osler. Phila. Med. Jour. 4: 453-455, 1899. (This is a hitherto uncatalogued letter by Osler.)

**Mabey was another patient of Hutchinson.

Kissmeyer acquiesced to the suggestion that the name he had bestowed upon the condition be changed from "La maladie de Boeck" to "La maladie Besnier-Boeck". From the historical evidence here presented, however, I believe the malady should properly be called "Hutchinson-Boeck's disease" or "Hutchinson-Boeck's 'Sarcoid'."

HUTCHINSON-BOECK'S "SARCOID"

The second and chief purpose of this paper is to draw again the attention of the medical profession to the protean manifestations of this bizarre condition. Neither, strictly speaking, a disease of the skin nor related to sarcoma, practically always benign in its course, its etiology has to date remained undetermined. Although thought by some to be a manifestation of tuberculosis, in the majority of cases the tuberculin test and the usual animal inoculations of tissue have given negative results; but those who believe in tuberculosis as the cause of the disease explain these negative tests by assuming that the histologic changes are a result of "anergy" to the chemical products of the tubercle bacillus. Because a similar microscopic pathology is at times seen in leprosy, syphilis, and in certain instances after subcutaneous injection of oil or paraffin, some authors, particularly the French school, speak of a "terrain sarcoidique". Finally, Kissmeyer and his followers refuse to accept tuberculosis as the etiologic factor, and, although offering in confirmation nothing but negative evidence, regard the disease as due to an unknown organism or virus and therefore entitled to be considered an entity *sui generis*.

In the field of *pathologic histology*, very little has been added to Boeck's original description—foci of endothelial cells with a thin margin of lymphocytes and connective tissue septa, no tendency to necrosis, caseation, or accumulation of Langerhans' giant cells,—an appearance somewhat similar to that seen in tuberculosis. This histologic picture has been recorded not only in the skin, but in the lymph glands, spleen, lungs[35], bones, mucous membranes, conjunctivae, and parotid gland.

Treatment has usually consisted either of local therapy such as fulguration of the skin lesions, or of general measures such as arsphenamine intravenously or Fowler's solution *per os;* but due to a tendency of the affection to spontaneous remissions, the efficacy of these procedures has been difficult to evaluate. Recently Lomholt[36] has reported good results in twelve cases from injections of "antileprol", but he has not as yet followed his patients over a sufficiently long period of time to confirm this impression. In the present instance the patient was induced to give up exercise, to go to bed in the afternoon and early in the evening, to get as much sunshine on the bare skin as possible, and take large amounts of cod liver oil and extra amounts of milk. The results of this régime, over four and a half years' time, were impressive.

CASE REPORT

The case is that of a white male, married, American high school teacher, aged thirty-six, who entered the hospital May 19, 1931, complaining of weakness and loss of weight of one year's duration.

Present Illness. Four years ago, he noted a superficial lesion on the chin, and some time thereafter similar lesions appeared on the face, trunk, and upper extremities. During the next three years the patient tried several different remedies and an equal number of doctors without amelioration of his condition. One year ago, he appeared in the Dermatologic Clinic and at that time showed several firm, elastic, dull red, pea-sized nodules on the chin and about the corners of the mouth. Fowler's solution was prescribed, but there was only slight improvement. A lesion on the left shoulder was biopsied and a pathologic diagnosis of "sarcoid" was made. Several of the skin lesions were fulgurated with a high frequency current with some cosmetic improvement.

For the past year his strength had been failing and he had declined from 192 to 142 pounds in weight. Three or four months prior to entry, an additional symptom, consisting of a slight cough accompanied by occasional nausea and vomiting on arising in the morning, made its appearance. At or about the same time he began to note gaseous eructations and epigastric distress at various times during the day, apparently unrelated to meals. Eight weeks before entry he was examined in the Medical Clinic because there had been no improvement in his skin condition and because pathology in the chest had been observed on fluoroscopic examination. A roentgenogram revealed large lobulated shadows at the lung roots and he was consequently referred to the Tumor Clinic as a case of probable lymphoblastoma.

The *family and marital histories* gave no significant information.

Past History. He had never had an important infectious disease. In the U. S. Infantry during the World War, he had received severe shrapnel wounds which involved the left frontal region of the skull, the posterior aspect of the left shoulder, and the soft tissues of the left upper arm, and for these had undergone numerous operations. During the past thirteen years since the war, he had experienced two generalized convulsions lasting a few minutes each, which he attributed to temporary digestive disturbances. Aside from frequent attacks of sinusitis and slight dyspnea on exertion, the rest of the past history was negative.

Physical examination showed a well-developed and nourished man, with some weight loss. There were numerous 0.5 to 1 cm. slightly umbilicated, dull purplish-red, non-tender, shiny nodular lesions with small surrounding areas of induration scattered over the face, trunk, arms, and upper legs, and which seemed to show a predilection for the old shrapnel scars. There was a large flat, atrophic scar over the posterior aspect of the left shoulder, the result of an old burn, and a linear scar on the mesial aspect of the left upper arm, the result of an operation for a gunshot wound. On the skull there was a circular bony defect (2 x 2.5 cm.) in the left frontal region with visible pulsation synchronous with the radial pulse and which bulged on cough-

ing. There were several 1 cm. glands under the angles of each jaw and a similar sized one below the symphysis of the mandible; there were two 4 cm. rather soft, nontender, slightly matted glands in each axilla and in each groin; a 1 cm. gland could be palpated in the right posterior cervical triangle. The lungs showed no abnormalities to percussion and auscultation. On examination of the abdomen the tip of the spleen was easily palpable 2 to 3 cm. below the costal margin on deep inspiration, and on deep pressure there was slight tenderness in the right upper quadrant and epigastrium. The liver edge was not felt.

Laboratory findings. Urinalysis was negative. Blood examination showed: white blood corpuscles 9,800, red blood corpuscles 4,650,000, hemoglobin 80 per cent. The blood smear showed: polymorphonuclears 65 per cent, small lymphocytes 14 per cent, mononuclears 20 per cent, eosinophils 1 per cent, platelets slightly increased, the red blood corpuscles normal in appearance. The Hinton test was negative. An intradermal tuberculin test was moderately positive. During the patient's stay in the hospital the temperature varied from 97.5° to 100.5°.

FIG. 1. Microscopic section of axillary gland removed for pathological examination. Note collections of epithelioid cells without giant cells or caseation.

A *biopsy* of the lymph nodes in the axilla was performed and, at the same time, a skin lesion on the left forearm was removed for examination. *Pathological report* (Dr. T. B. Mallory): "The specimen consists of two enlarged lymph nodes, the larger measuring 1 x 2.5 x 4 cm. They are moderately firm and on section have moist, glistening, pinkish-white finely lobulated surfaces. There is a small elliptical piece of skin measuring 1.5 x 1 cm. On microscopic examination the lymphoid tissue is largely replaced by well-defined compact conglomerate tubercles showing little caseation. The section from the forearm shows the typical structure of the lesion which is usually called sarcoid."

X-ray examination (Dr. G. W. Holmes), April 27, 1931 (three weeks before entering the hospital): "No organic pathology in the stomach or duodenum. The diaphragm is sharply outlined on both sides and moves normally with respiration. There is rather soft, fine mottling at both lung roots. The changes are most marked around the root of the lung and gradually fade out toward the periphery. On the right side there is a narrow dense band extending across the chest in the region of the septum between the upper and middle lobes. There are large lobulated shadows at both lung roots. These shadows occupy the region of the hilus of the lung. They are quite dense and are about 8 cm. long and 5 cm. wide. They are roughly kidney shaped. There is no evidence of calcification. The heart shadow is large and prominent in the region of the right auricle. There is no increase in the supracardiac shadow. The aortic knob is indistinct. There is no erosion of the ribs or other abnormality of the chest wall. There is no evidence of enlargement of the peritracheal glands. The examination shows evidence of an extensive process involving both lung fields, the interlobar septum on the right and the hilus regions. It is accompanied by some dilatation of the heart. Lymphoblastoma is the most probable diagnosis." (See fig. 2.)* "The x-ray films of the hands show no deviation from the normal."

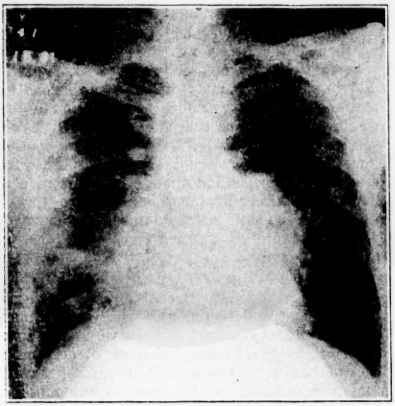

FIG. 2. X-ray film of the chest, May 15, 1931. (See text.)

Progress Notes: June 15, 1931: On a modified tubercular régime (consisting of rest in the afternoon, cod liver oil, extra milk, etc.) there had been a gain of three pounds in weight and the glands seemed to be smaller.

August 3, 1931: The patient had gained eight pounds since discharge from the hospital. There were no new skin nodules. Several of the newly developed lesions had disappeared. The older lesions were healing well, a few having disappeared entirely. There was a 2 cm. gland in the right axilla, two 2½ cm. glands in the left axilla, three or four 2 to 3 cm. glands in the groin, and the spleen was palpable 1 to 2 cm. below the costal margin.

*The reproduced x-ray film was taken three weeks after the foregoing report was made, but on comparison, the two were almost identical in appearance.

September 11, 1931: The patient was still gaining weight, having added twelve and a half pounds since leaving the hospital. His general health was excellent. The lesions which had been fulgurated were gradually fading and no new ones had appeared. The glands in the axilla measured about 2 cm.; those in the groin had not changed in size. The spleen was just barely palpable on deep inspiration.

August 12, 1932: Since the last examination, a year ago, the patient had been unusually well. He had gained steadily in weight up to 179 pounds. All the skin lesions had completely disappeared and had not recurred. On physical examination, scars of the fulgurated skin lesions and a 2 cm. gland in each axilla were the only objective findings. The spleen could not be felt.

September 15, 1933: For the past year the patient had enjoyed the best health since 1917. His weight had varied between 185 and 190 pounds, he felt physically more ambitious than he had for years, and seemed normal in every way. On careful questioning no symptoms of any sort could be elicited and no new lesions could be detected on physical examination. In the right neck there was still present a 1 cm. superficial nodule, but no glands of importance could be felt in the axilla or groin, and the spleen was not palpable on deep inspiration. *X-ray examination:* "There is a definite and striking improvement in the appearance of the chest since the last examination. The lung roots, however, are still definitely abnormal. The miliary and linear shadows in the lung fields have almost disappeared." (Fig. 3.)

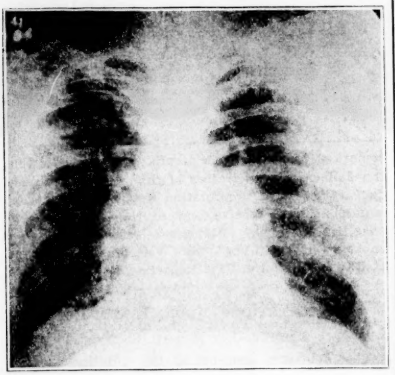

FIG. 3. X-ray of the chest, September 21, 1934. (Forty months after treatment was begun.)

September 24, 1934: Aside from occasional heartburn, the patient's condition had remained excellent. Physical examination was entirely negative. *X-ray examination:* The gastro-intestinal tract showed no variations from the normal. The chest exhibited the identical appearance described the previous year.

October 31, 1935: There was no evidence of disease on physical examination. X-ray films of the chest revealed no detectable differences when compared with those made in September, 1933.

COMMENT

The evidence from the cases previously reported in the literature and from the one presented here is that "Hutchinson-Boeck's 'sarcoid'" is a generalized systemic disease. It affects at times not only the skin, but the lymph glands,—both peripheral and those at the hilus of the lungs,—the spleen, the parenchyma of the lungs, the phalanges of the fingers and toes, the mucous membranes, the conjunctivae, and the parotid gland. In its power of invading many organs it simulates lymphoblastoma and is therefore a disease which should be recognized and studied by the internist, the surgeon, and the roentgenologist. Since iritis is not infrequently reported as a precursor or as accompanying the skin lesions, the ophthalmologist, too, should be acquainted with it. One of the probable reasons it has remained so long overlooked by the internist is the multiple and philologically formidable nomenclature given it by dermatologists and others:—Boeck's disease, Besnier's disease, Besnier-Boeck's disease, Besnier-Tenneson's disease, benign lymphogranulomatosis, sarcoid, multiple benign sarcoid of the skin, ostitis tuberculosa multiplex cystica, miliary (or disseminated) lupoid, *lupus pernio,* and "chilblain lupus". It would simplify matters if all concerned would agree upon a single cognomen at no distant date.

The case I have reported showed changes limited to the skin and reticuloendothelial system —lymph nodes and spleen; for although Kissmeyer doubts the involvement of the spleen in many of the reported cases, the fact that under treatment this patient showed a decrease of the splenic enlargement which paralleled the regression of the lymphadenopathy, cannot, in my judgment, be dismissed as fortuitous. It seems logical, therefore, to assume that the spleen would have shown the same morbid histology as that demonstrated in the biopsied lymph gland.

This malady, finally, offers a possible solution to another problem,—that of the true diagnosis in instances where apparently healthy patients, without skin lesions, give evidence of increased hilus shadows accompanied by diffuse infiltration of the lungs at x-ray examination,—an appearance not infrequently reported by roentgenologists as tuberculosis. *Are these patients suffering from Hutchinson-Boeck's "sarcoid"?* More careful roentgenologic and clinical observation may in the future throw light on this question.

CONCLUSIONS

(1) Hutchinson-Boeck's Disease (generalized "Sarcoidosis") is a generalized systemic disease and may involve in addition to the skin,

the lymph glands, spleen, lungs, bones, mucous membranes, conjunctivae, and parotid gland.

(2) Jonathan Hutchinson was presumably the first to mention the condition and deserves to be remembered as long as the disease is eponymically designated.

(3) A case is reported with involvement of the skin, lymph glands (peripheral and hilus), and spleen,—with apparent cure after four and a half years' observation.

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CATHARTIC TO MIX IN BREAD COSTS FOOD FAKERS $600 FINE

A powerful coal-tar cathartic has no proper place in bread or any other product sold as a food. The Food and Drug Administration regarded phenolphthalein as an adulterant when it was used as an ingredient of what the manufacturer called a "laxative health bread." The Federal court at St. Louis, Mo., agreed with the food officials and imposed a $600 fine on Edward Ownen, Frank Dawdy and Glenn Allmon trading under the fancy name of Bakers' Research Co.

This concern has been selling "Ownen's Viti-Veg" a mixture of flour, bran and between ten per cent and twelve per cent of phenolphthalein, a coal-tar cathartic. This mixture was recommended to bakers for addition to their regular bread mix. The product was to be marketed as "laxative health bread."

Bread, a staple article of the diet and consumed by everyone from infancy to old age, should not be used to mask the presence of a powerful laxative, in the opinion of the Food and Drug Administration. W. G. Campbell, Chief of the Administration, remarked recently, "It is peculiarly appropriate that the deliberate perpetrators of this, one of the most flagrant types of adulteration uncovered in recent months, should receive one of the largest recent penalties — $600." Shipments totaling some 700 packages of "Viti-Veg" were seized and destroyed last June.—*Bulletin, U. S. Department of Agriculture.*

CONNECTICUT MEDICAL AFFAIRS

The Tri-City Medical Society

The February meeting of the Tri-City Medical Society of Norwich, New London and Willimantic, Conn., was held Thursday evening, February 6, 1936, at Uncas-on-Thames, Norwich, Conn., with the President of the Norwich Medical Society, Dr. John Raymer, presiding.

Dr. William B. Castle of Boston, Associate Professor of Medicine at Harvard University, delivered an informal talk on "Recent Advances in Blood Diseases". In his talk Dr. Castle reviewed some of the recent theories regarding polycythemia, pernicious anemia, leukemia, etc., and answered questions relative to these blood diseases.

NEW ENGLAND SURGICAL SOCIETY

FOOT STATICS AND SURGERY*

BY FREDERIC J. COTTON, M.D.†

FOOT statics have been neglected of late years and apparently little understood.

Yet the foot is the weight-carrier that keeps us off the ground, and its smooth function, unimpaired by ill-use, repaired or reinstated in case of ill use, deformity or injury, is most important.

Up to 1900, foot statics was considered a problem in purely *static*, not kinetic, mechanics.

A vast literature had been produced, German in the main, culminating, if my memory serves me, in works by one Meyer.

Out of all this survives one item only: There *is* a sort of "triangle of support" (seen here) and, if the stress of body weight, transmitted through the leg, falls outside, or more often inside of this neat triangle, trouble is likely to follow for the line of weight-bearing through the tibia should not be far off centre for normal function. (Fig. 1.)

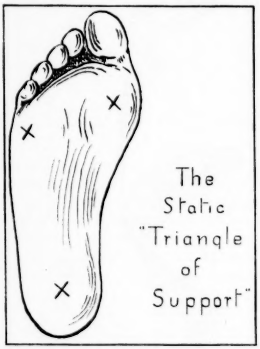

FIGURE 1.

Forget all the rest!

Particularly, forget all you ever heard about "arches", both longitudinal and transverse. If one must be architectural about it there are *trusses* in the foot, *not arches*, and the truss conception is best forgotten also; it isn't so simple as that!

Dr. Edward H. Bradford first had the idea of the moving tarsus, I think, and of muscle balance and of the value of muscle training, which is so important to a proper conception of foot function.

Whitman, with his rocking plate, and Dane with his "pronated foot", understood much about all this as well.

Lovett and the writer worked a season on the kinetic mechanics of the foot, using the then new x-ray on the living foot to help.

Then, Dr. Thomas Dwight, the anatomist, went over all our work and changed his teaching. The specimens relevant to all this are still in the Warren Museum[1, 2].

FIGURE 2.

1. Outer end, joint surface, calcis.
2. Inner corner. 1', 2', like points on astragalus.
3. a. b. Concave surfaces, for receiving 3'.
3'. Astragalus head.
4. Calcaneo-scaphoid ligament completing cup.
5-6. Back limit of front joint.

Some people digested all this to their profit, and that of their patients, but since then nothing especial has been added to our knowledge until one Mr. Philip Wiles, London surgeon, neatly described what we had been stupid enough to overlook, namely the muscle function of the long peroneal in relation to the mobile function of the first toe unit. We had all known the effects of displacement of this unit, but no one had worked out the corrective function of the peroneus longus muscle[3]. Perhaps, one may now talk with confidence (with reserves, of course) of the function of bones, joints and muscles, and of their action in the amazing supporting weight function of the foot.

At any rate, I am going to try to make this intelligible.

*Read at the Annual Meeting of the New England Surgical Society at Manchester, N. H., September 28, 1935.

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The foot has many joints. The body weight, transmitted through the tibia and astragalus, drops to the os calcis, scaphoid, and cuboid. These three form a queer irregular cup, into which the astragalus fits. (Fig. 2.)

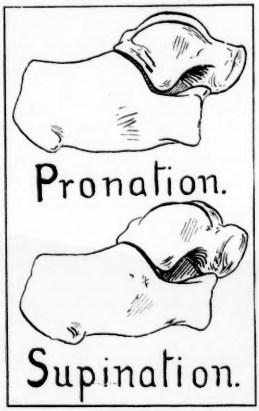

FIGURE 3.
Calcis rocks in and out (lat. view).

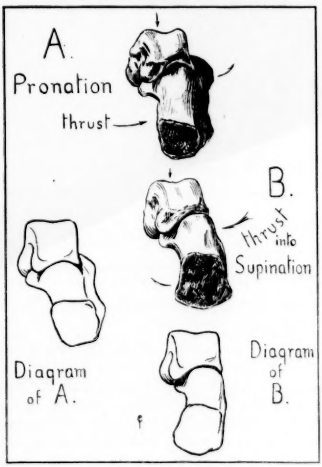

FIGURE 4.
Same from behind.

In this cup, the astragalus *rocks* (or more accurately the cup rocks under it) in standing and walking.

The calcis rocks *in* and *out*, and, as the heel goes inward, the whole heel bone rotates *under the astragalus*. (Figs. 3, 4 and 5.) And, with this rock and shift, the "cup" being of uneven diameter, the scaphoid moves *inward*, and the whole front part of the foot goes inward as well.

And this movement occurs in just the same way, whether the foot moves in inward rotation about a vertical axis, or the leg, and with it the astragalus, rotates outward. (Fig. 6.)

FIGURE 5.
Upper drawing shows relaxed "pronated" position. Below is shown the correction to proper position by muscle action—in proper balance.

Apart from this motion, but working in like direction, there is *some ad-* and *ab*-duction movement (with slight rotation) at the *medio-tarsal* joint. (Fig. 7.)

And then, too, there is the important independent action of the first member, comprising the first cuneiform, the first metatarsal and the great toe, moving up and down on the scaphoid as a base. (Fig. 8.)

With the downward movement of this "first member", under control of muscle pull of the long peroneal, the "anterior arch" arches up.

The tibialis posticus lifts and accents the "long arch", and the long flexors, particularly of the hallux, help in this lifting.

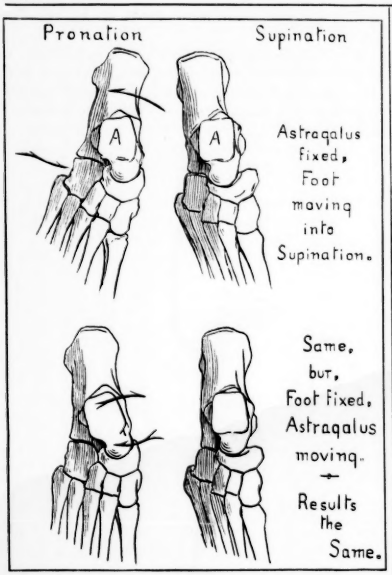

FIGURE 6.

The tibialis anticus helps not at all, but does lift the foot to clear the toes in stepping. It is, properly, as Wiles tells us, an *opponent* of the long peroneal, tending to flatten *both* arches, in the position of *inversion* of the foot. It does not act to put the foot into stable position, but into a varus far out of any normal standing position. All the exercises based on action of the tibialis anticus are not only useless but harmful.

The long peroneal pulls the cuneiform and metatarsal, the "first" member, *down* and *out*.

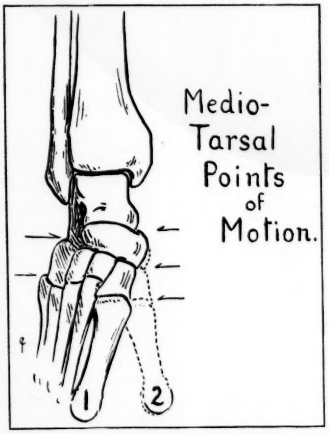

FIGURE 7.

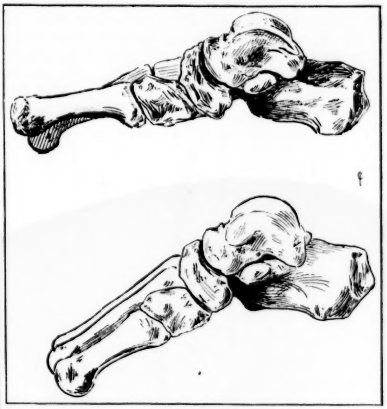

FIGURE 8.
Movement down and out, of 1st cuneiform, and 1st metatarsal under pull of peroneus longus.

FIGURE 9.
The metatarsals seen from behind. Pulled by the long peroneal, metatarsal I flexes downward, rotates and moves outward.

Unaided by the posterior tibial it would roll the foot into undesired valgus. (Fig. 9.)

Its real function is to bring the head of the first metatarsal *into the tread*, and to raise the so-called "anterior arch" as the posterior tibial and the flexors deepen the "long arch" and bring about a varus position.

The tibialis posticus can be exercised and toned up, easily. Such exercise tones the flexors as well. (Fig. 10.)

The long peroneal can be brought back to efficiency only by restoration of voluntary function, as far as we know, a matter of education which is not always easy. (Fig. 11.)

Many have long known that plates are but a crutch for old ladies; they cure nothing, and prolong treatment.

Modified shoes and heels help those who will help themselves, and they stall the very young along to an age where these children can be induced to coöperate, mainly on the plea of possible efficiency in sports, or dancing. The minimum age for normally vain females is four to

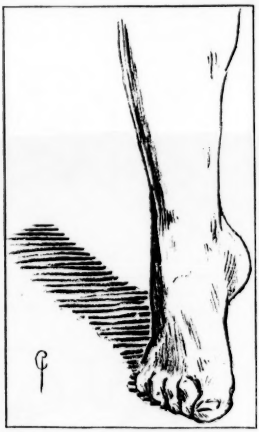

FIGURE 10.

Exercise to develop and tighten the muscle group of tibialis posticus, long toe flexors, et al., that make for "supination" and the lifting of the "arch".

five, males about two years behind this schedule.

Such exercises as will bring back real coördination of the tibialis posticus, flexors, and long peroneals, require an attention and persistence not commonly met with in our offices, as the patients run, day in, day out. Yet cure of the familiar type of flat foot depends in the end on restoring muscle balance and proper action.

For this reason the problem is arduous. Many of our patients are going to stick to plates or "supporting" shoes, till they sit down permanently in chairs, or accept steel leg braces.

The vigorous, young or old, can be cured by temporary support, reinforced by directed exercise, in the great majority of cases.

Some flat feet, not a few, can be helped by operation, thereby changing statics. Not many are these likely to be cured, unless care is at hand to utilize muscle action made easier by the operative correction.

The helpful operations seem to be the following:

The Gleich Operation. This is applicable to many conditions usually the result of injury (fig. 12) whether to tarsus or ankle. It has the advantage that the heel may be shifted in any desired

FIGURE 11.

The "thumb action" in the foot. Above one sees weight carried on the outer side of the foot by muscle control,—the first metatarsal is entirely out of weight-bearing function.

Below one sees the first metatarsal *down, in action.* This is what has been called the *thumb* action in the foot. It is the result of the down-driving action of that curiously aligned muscle, the peroneus longus, that goes down the leg, across under the foot, just to do this,—to pull the first metatarsal and its *toe, down, out,* into the working tread of the foot.

direction and for some distance. Also it is a strangely undisturbing operation. It was devised two generations back for the cure of the flat foot of bony type, the "Rad-Fuss" so common in peasants. It was forgotten, revived here to correct bad results in os calcis fracture—since used for many purposes.

The Cotton Advancement Operation. This consists in advancement of the calcaneo-scaphoid ligament, a logical operation which is useful in certain few cases.

Operation on the first member, the cuneiform wedge.

This is applicable to any type of case in which, from long-standing deformity, the first metatarsal head cannot be made to carry any weight. Such a condition may result from an inveterate flat foot dating back to childhood with changes in bone shape as well as lax ligaments. Or it may be the result of trauma with some deformity.

In hallux valgus cases such an ascent of the "first member" is common and important.

In some cases of "anterior arch" trouble, one finds it in marked degree and it seems likely that in cases of such trouble we should describe the deformity as an ascent of the first member rather than as a descent of the second, third or fourth.

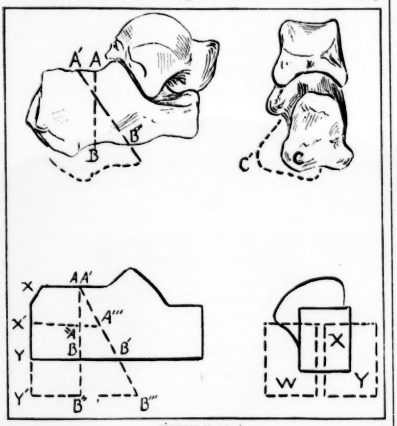

FIGURE 12.

Gleich operation. Diagram.
This operation, devised a generation or more ago, for treatment of the flat feet of European peasants, has proved of the greatest value. One can shift the heel in or out at pleasure. Revived here for handling certain cases of valgus following os calcis fracture, the operation has proved of value for all sorts of things—for example, shifting a heel in a case of club foot, brought back, except for this detail, by previous handling.
It is simply an osteotomy across the neck of the calcis that makes it possible to shift the heel down and forward,—see AB, A'B', or inward—see C-C' or what one will.

In any of these classes a bringing down of the metatarsal head for three fourths of an inch is simple, and more can be obtained.

The operation is simple, not painful, and weight-bearing begins within a month.

In the short series of cases done since I devised this operation, there has been no trouble in any and the correction obtained has in no case been lost.

It seems to merit further use.

There are other static factors, first, the short heel cord.

Short heel cord means "metatarsal strain" from the resultant habitual "toeing out" that infallibly drops the long arch, and makes trouble.

Often, but not always, this results from habitual wearing of high heels.

It has long been a source of income by way of tenotomy of the tendo-achillis. (Fig. 14.)

This operation, at times justifiable, may usually be avoided by the simple use of the "shoe" or strap wrench, devised by the late Dr. Gwilym Davis, the use of which does not even need anesthesia.

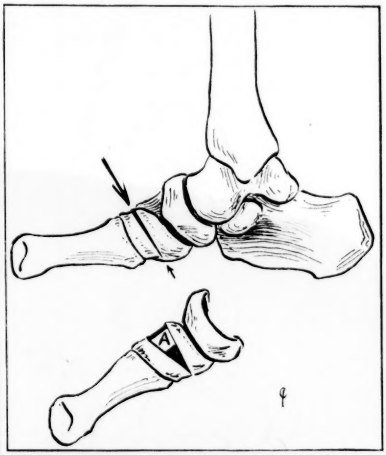

FIGURE 13.

If the first metatarsal is up it may be brought down, as here shown, by splitting the first cuneiform bone and wedging the remaining gap wide open. This is a matter of surgical carpentry: the amazing thing is the prompt repair, and the early return of function.

Another factor of disability is the "dropping of the anterior arch," sometimes associated with the distressing "Morton's toe" from nerve pinching, usually between third and fourth metatarsals.

Proper pads, set in behind the tread of the ball of the foot, with or without circular strapping, relieve most of these cases, temporarily, and may be required permanently, although persistent exercise of the flexors of the toes will usually effect a real cure if persisted in.

In certain obstinate cases with or without hallux valgus, the operation already described does the work and is far preferable to any resection of metatarsal heads. (See figure 13.)

Hallux valgus is very much a matter of statics.

Blamable to short shoes not always, and rather often running in family lines, it cripples often

because of "bunion" friction, but also because there is usually an *ascent* of the first metatarsal, a sort of separation of the first from the rest "primo-varus" which means nothing but a description of the deformity from adduction of this metatarsal with a wide space between this and the next metatarsal.

With this, an upward movement of the first member takes place, and it was on this type of hallux valgus case that I first did the operation here talked about. In these cases the bony wedge taken out of the hallux valgus makes a good wedge to keep open the gap in the osteotomy gap in the first cuneiform.

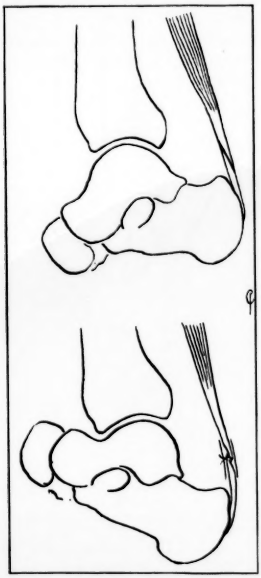

FIGURE 14.

Lengthening of the tendo-achillis. An operation to be done seldom. As a rule the Gwilym Davis "strap-wrench" does the work. *But*, if one must cut the tendon, the matter comes down to a question of judgment as to length. Of course, the section is to be oblique.

Operations on hallux valgus, as such, we cannot consider here because of restricted space for they are many, but the operation for dropping the first metatarsal to its proper level with the others just shown is of importance. (Figs. 15, 16, and 17.)

"Hallux rigidus", which is loss of dorsal flexion between the first metatarsal and its phalanx, from arthritis or due to fixation in plaster, is crippling because it hurts, and because this hurt makes the patient "toe out" and roll the foot into valgus, and so puts it out of commission, mechanically.

Such a condition again is readily remediable by easy surgery.

FIGURE 15.

(X-ray before and after Jenner.)
Mrs. J.
A very vigorous heavy-weight of forty-five years, crippled for years. The obvious usury of the metatarsal heads is aside from the present point. The *working* disability was of the *first* unit. One sees, left, the original set-up: right, the postoperative detail.

FIGURE 16.

(X-ray before and after Jenner.)
Same, seen laterally. To the right one sees the reshaped metatarsal head shifted *downward*. Also a superfluous chip of the graft at the point where the cuneiform was wedged apart.

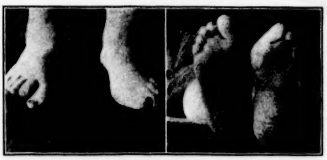

FIGURE 17.

(Photo after Jenner.)
Same case. The two feet; right foot operated. Later the left foot was operated on in the same way. The clinical result unbelievably good, considering the damaged heads of the other metatarsals, about which we did nothing.

And that means only a clearance of the top half of the first metatarsal joint surface, not a difficult, but useful procedure.

In relation to statics fracture cases must be considered.

Fractures of the metatarsals are problems of correction by local osteotomies when indicated.

Midtarsal displacements not rarely call for correction by removal of a deep, often wide, wedge from the convex side.

The typical, if not common, varus deformity accompanying fracture dislocation of the scaphoid can be corrected with a Gleich operation.

Faulty statics following os calcis fracture may call for removal of bone on the outer side with or without a shifting of the heel. Such removal of bone with the Gleich operation works out very well.

The correction by arthrodesis has the drawback that it deliberately destroys all movements of the tarsus which might otherwise be preserved.

It has its place for relief of pain, not for any correction of statics.

Deformity from astragalus injury usually means arthrodesis between the tibia and astragalus with such sloping of cut surfaces as will give right statics.

This does not sacrifice any tarsal motion. Astragalectomy is to be avoided. The results are sometimes tolerable but the patient is at best a limping cripple.

Now as to ankle fractures proper: Outward deviation of the foot with valgus means Pott's fracture. Given any considerable deviation (see fig. 1), any relief short of operation is apt to be partial, if not futile. Long ago Stimson showed us how. This is his bimalleolar osteotomy (fig. 18), a most useful operation.

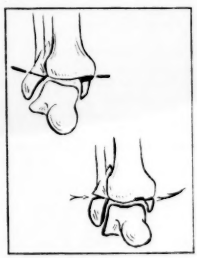

FIGURE 18.

Stimson's bimalleolar osteotomy.

A cross-cut and a lateral shift inward. The first, I think of all the operations of "reconstructive" surgery, as good as when Stimson described it, a generation or more ago.

For backward dislocation, my class III fracture, sometimes labeled with my name, there are two procedures.

Often enough the end result shows a backward displacement with no elements of a stable joint, and only too often with an obliquity of the remains of the joint inward or outward.

For such a case there is nothing for it but a radical reconstruction, such as is shown in figure 19A; this is usually practicable, though a

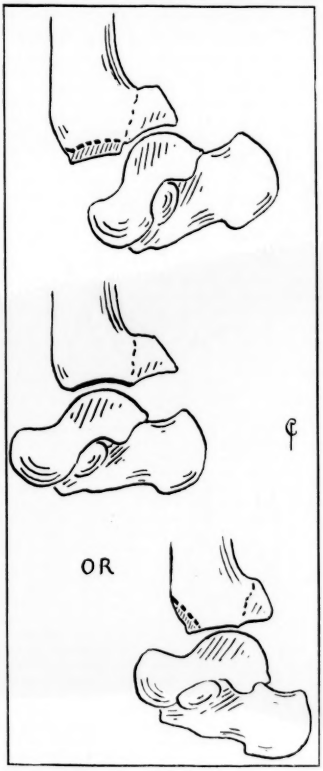

FIGURE 19.

In a Class III fracture. If the foot is back, entirely out of alignment, one must reconstruct. The posterior fragment cannot be moved. The malleoli can be cut across, a fresh bed cut in the tibia for the astragalus.

These operations do rather well, *and*—they do *not* result in ankylosis! Given *one* joint surface covered with cartilage, *one gets no cross adhesions*. Loss of motion may often result, but *not from cross adhesions between joint surfaces*.

difficult and heavy operation. I have done it often. Lately in one case, that of an elderly woman, this seemed impractical due to the risk of time shock. An arthrodesis with correction was done.

In other cases of this class the displacement is less and there is some sort of a decent joint,

with the disability largely from contact of astragalus and front edge of the tibia or pinching of tissue between.

In such a case the simpler operation shown in figure 19B suffices, and usually gives great relief out of proportion to the simple nature of the operation.

Static problems of varus deformity are uncommon. When met with they must be handled

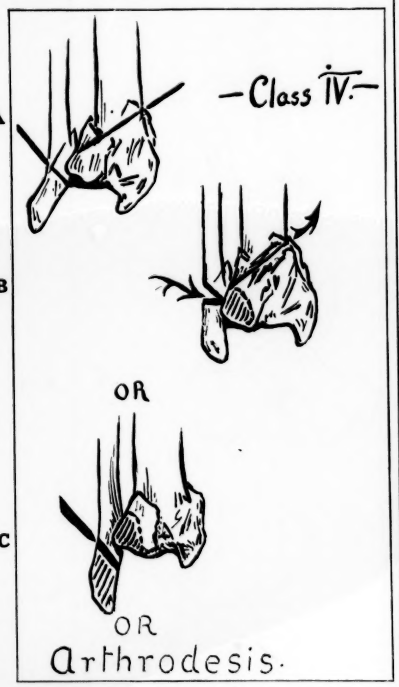

FIGURE 20.

Supramalleolar osteotomy:
Subperiosteal resection.

Class IV fracture.
Given the not unlikely adverse result, one may:
(1) Shorten the fibula, *relatively* too long and correct any serious deviation of the tibia by a cross-cut osteotomy; or (2) do a subperiosteal resection of the superfluous part of the fibula; or (3) do an arthrodesis. Gallie's technique is the best.

by shifting the foot back (in reversed Pott's) by bimalleolar osteotomy, or by doing a transverse or wedge osteotomy of both bones rather close to the ankle joint. If the incisions are sloped down from outside and inside to the centre, correction may be made very exactly and without danger of slipping.

The reverse deformity may be dealt with in the same way, and so may anterior or posterior bowing, and this applies to many cases with displacement due to fracture well above the joint. From all points of view and especially with regard to speed of repair the low osteotomy is to be preferred.

In cases of my "class IV", smashes of the lower end of the tibia with comminuted fractures into the joint with almost inevitable deformity and with some shortening almost inevitable, incurred in heavy falls on the foot with the foot driven upward, smashing the tibia, driven upward past and away from a fibula which may often enough not be broken at all, one has real problems in statics.

Varus deformity with forward or backward spreading is what one sees in late results in the unlucky cases, and the unfortunate ones are lamentably many.

Shortening cannot be corrected but often a low osteotomy of both bones will at least give proper weight-bearing. (Fig. 20A, B.)

Some cases may be fit only for arthrodesis with static correction, giving at least a mobile tarsus and foot, in others the problem is simpler. It is the long fibula, often intact, driven down into the os calcis, throwing the foot into sharp varus position and giving pressure pain besides.

In such, a subperiosteal resection of the fibula (fig. 20C) is all that is to be done; and the results are surprisingly good as a rule.

Limits imposed on time and space make this a brief talk around the pictures and all detail as to manipulations, apparatus to ease strain, shoes and modifications of shoes, and the large field of exercise work brought down to working terms, must be omitted.

Perhaps I have enabled you to have a clear picture of what we know of foot statics, of the importance of keeping this clear view with us in much of our surgical work.

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2. Lovett, R. W., and Cotton, F. J.: Pronation of the foot, considered from an anatomical standpoint. Journal of Boston Society of Medical Sciences **2**: 155 (April 19) 1897-98.
3. Wiles, P.: Flat-feet. Lancet **2**: 1089 (Nov. 17) 1934.

DISCUSSION

DR. EZRA A. JONES (Manchester, N. H.): I am very much interested in this subject and it deserves much better discussion than I am able to give to it. As a matter of fact, the title of this paper did not tell me very much of what it was about. The first time I saw Dr. Cotton's paper was last night. I determined to go home and read it over and write a better discussion, but I was unable to do so.

However, the points that he brings out are very interesting and, I think, very valuable. The infantile cases, I think, have shown us a lot about muscular action of the foot, although I was not ac-

quainted with the fact that the peroneus longus was so valuable, but I think it probably is.

I think the exercises that we give our patients to correct their flat feet, when they come up on the toes, improve the tone of the peroneus longus and probably help pull the first metatarsal head down.

There is another point that Dr. Cotton brought out that is interesting to me, showing that the rotation or eversion of the foot is principally at the astragalo-calcaneus joint. I remember trying to cure cases of infantile, attempting to give them a better weight-bearing position by ankylosing the astragalus and scaphoid, without very much result. But when Dr. Hoke devised his operation, which not only ankyloses the astragalus and scaphoid, but also the astragalus and calcaneus, it gave, I think, better results.

The pronation is probably what causes us pain. You all know that the American Negro has perfectly flat feet and he does not have very much foot trouble, while the same degree of flatness in the white race is usually accompanied with pronation. The amount of pain they have depends more on the pronation than on the flatness of the long arch.

I think Dr. Cotton was right when he said we should disregard our arches and talk about our weight-bearing. Of course, in weight-bearing where the line comes on the inner side of the foot instead of the outer side, we get all kinds of troubles, and trouble, as you all know, is not limited to the foot itself, but causes rotation of the knee joint, backache, and gives us many disabilities.

I was interested in the Gleich operation. I should think it would be an excellent operation for our cases of fractures of the os calcis where the bone is displaced outward, that is, where it is rotated outward. As you know, there is a large amount of callus formation usually under the external malleolus. In chiseling that off we do not get very satisfactory results. I am wondering if this Gleich operation would not help to bring the calcaneus back where it should be.

I was interested in Dr. Philip Wilson's operation of ankylosing the astragalus and the calcaneus, but it seems to me that this would give you better weight-bearing without destroying any joint surface. Thank you.

PRESIDENT JOHNSON: Is there any further discussion?

DR. DAVID CHEEVER (Boston, Mass.): *Mr. President*—I was immensely interested in Dr. Cotton's paper and especially in his beautiful drawings.

I just wanted to ask him to elaborate a little further about the statement which I understood him to make, that there are no arches as such in the foot. Of course, I think all of us have been brought up with the architectural conception of anteroposterior and transverse arches. That is pretty well fixed in our consciousness and Dr. Cotton, himself, is still arch-conscious in his description, as he said he would be, because in the description of his demonstrations, his pictures, he frequently mentioned the word "arches".

If you recall figure 7, I think it was, which showed in coronal section the transverse arch through the bases of the metatarsals, it seemed to me it was a beautiful picture of an arch as I understand an arch with a tie-beam growing across underneath represented by the tendon of the peroneus longus.

If they are not arches, I would like to get a little clearer idea of why they are not, so in the occasional anatomical talks that I have to give, I can be a little more up to date.

PRESIDENT JOHNSON: Is there any further discussion? If not, perhaps Dr. Cotton will conclude.

DR. COTTON: As to Dr. Cheever's arches, it is perhaps a matter of words. Strictly speaking, architecturally an arch is a curve which has abutments at the hips and may be built with a keystone or as a simple arch which maintains its height on account of the balance of the down thrust of the weight of the arch and whatever load is put on it, the counterbalance of that against the resistance of the hips at the side.

In the foot we have nothing of that sort. We have what is analogous to a roof in a house. We do not have Gothic or Roman cathedrals with arches. We live in houses that are tied together with trusses. A roof gets very little thrust, ought to give no thrust at all on a great beam. It is fastened together with cross-ties, king post, queen post, and is tied together as one structure. That is what we get in the foot. There is no thrust against the immovable lateral end to take weight, but we do have this truss which is tied together with a strap below.

It is not very accurately described that way, but there is something of an arch in it. In the long arch we have a plantar fascia running fore and aft, which is the lowest strap of the truss and we have the ligaments lying under the tarsal bones, close under the tarsal bones as an accessory strap.

It is perfectly true the astragalus comes down exactly like a keystone, but I think it is just as well not to bother too much about that, because, as I will say in a minute, the whole thing is complicated by a lot of other factors.

As far as the transverse arch is concerned, that is nearer an arch. The posterior transverse arch under the arch of the foot that is held in this position by ligaments, again acting as straps across the base of this almost semicircular truss. The anterior arch, I do not think can be called an arch at all. The arch is held up by the action of the flexor muscles. If you ever handle those cases and try to cure anterior arch dropping, so-called, by educating the muscles, you find you can do it in the majority of cases very easily.

I had a personal experience of that a couple of years ago when I happened to be the victim of an accident. During my convalescence, one anterior arch after the other went. I was completely crippled. I did not do anything about it, except to put a pad in for a day or two and exercise my toes. The arches came up all right.

The muscles, and not even the ligamental structures, hold the anterior arch, and I do not think there is any anterior arch—transverse, yes, longitudinal, yes, perhaps. If you want to call a truss an arch, that is a matter of words.

The reason why I dislike to think of arches or even trusses is because these motions of the foot, which interest us, are largely rotary motions, conditioned by the most complicated curves in the joints of the foot. If you settle down to work out the anatomy of the astragalus and the cup in which it rotates, it is enough to confuse you. You can see it happen, but even with the articulated bones, especially articulated in your hand, it is hard to see what happens.

What happens is that the front part of the foot is thrown in a given direction on account of the fact that the astragalus goes out and wedges the scaphoid in. It is that complicated kind of thing that makes it possible for us to walk, and not the support of anything like an architectural arch.

I would like to say a word, in closing, about the Gleich operation. The history is rather curious. I have not been able in research again to find the reference to that. Years ago in getting together

the Bradford and Lovett book, I did a vast amount of German reading. I ran into the Gleich operation. Later when I began to take up os calcis fractures I revived it for just the class of os calcis cases.

I did the Gleich operation. I have used it whenever I felt like it for all kinds of deformities of the foot where I wanted to shift the heel. Wherever I wanted to shift the heel, I shifted it there. The operation is a very simple one if you have ability to calculate angles. All you do is cut across the neck of the os calcis. Then you take your hand or hammer, whatever you like, and put the heel where you want it.

The os calcis has an enormous amount of repair power, as you know, too much in many instances, and these cases are able to bear weight without any distortion of the fragment, as early as five weeks. There is no reaction to the operation or sense of pain in any case I have ever seen. I must have done it a good many scores of times.

I recommend to you, gentlemen, the Gleich operation.

THE EFFECT OF CORAMINE ON POSTPARTUM PATIENTS UNDER THE ANALGESIC INFLUENCE OF SOME BARBITURIC ACID DRUGS*

BY ALEXANDER A. LEVI, M.D.,† AND CHARLES M. KRINSKY, M.D.†

MANY successful attempts have been made in obstetrics to alleviate the pain of childbirth. In addition to the amnesia and analgesia desired, some postpartum reactions which occur occasionally are found objectionable. Among these are the duration of the narcosis long beyond the period of pain and many hours past the end of the third stage of labor, the urinary retention, and the possibility of an idiosyncrasy to the specific medication used. These undesirable complications are largely responsible for the objections to analgesic agents in obstetrics. We have, therefore, endeavored to determine what medicament could perhaps decrease the period of postpartum narcosis and thereby eliminate a great many secondary manifestations. Coramine was used, in our series, because of favorable reports by investigators[1] on the efficacy of this drug in diminishing the duration of narcosis. The reports did not concern the use of this drug in obstetrical patients. We therefore undertook the study of this problem.

INVESTIGATION

It has been the accepted procedure for many years at the Evangeline Booth Hospital to administer nembutal by mouth and paraldehyde in oil by rectum for the purpose of obtaining obstetrical analgesia. The dosage varies from four and a half to six grains of nembutal given by mouth and four to six drams of paraldehyde in three ounces of olive oil administered by rectum, depending upon several variables such as parity, weight and progress of labor. These are given under as uniform conditions as possible. The criteria are first, regular pains which occur about five minutes apart; secondly, engagement of the presenting part; and thirdly, two or three fingers' dilation of the cervix. From study of many records the individual susceptibility to this medication cannot be definitely evaluated or anticipated, but it can be stated that the patients in the majority of instances enjoyed excellent amnesia. We were also able to conclude that the most undesirable effects were the length of postpartum narcosis beyond the time of actual need, the development of urinary retention, and the lassitude which persisted for several days. Practically no difficulty was encountered with the babies.

Idiosyncrasies of one form or another to drugs are well known. Our experience in such a case, and the recovery of the patient after treatment with coramine suggested the possibility of minimizing the undesirable reactions of nembutal and paraldehyde by its administration. The results obtained in this case proved to be the impetus for our study. In brief, the patient, a hospital case, was a primipara, aged twenty-one, who had been carefully observed throughout her labor. The prenatal history was normal. Ten and one-half grains of nembutal by mouth and nine drams of paraldehyde by rectum were given in small, divided doses over a period of fifty-four hours, the medication being repeated as consciousness returned. The baby weighed 7 lbs. and 6 ounces and was delivered by a low forceps application and episiotomy. With the exception of a marked caput, the baby appeared and remained normal, breathing well after the delivery. The maternal pulse averaged 88 and the fetal heart 140 per minute until four hours before the delivery, at which time both increased, to 144 and 172 respectively. At the time of the delivery, the blood pressure was systolic 98 and diastolic 78. Soon after delivery, the maternal pulse increased from 128 to 140 per minute, and the blood pressure dropped to systolic 76 and diastolic 60. The fundus was firm, and very slight oozing from the vagina was noted. There were no evidences of abnormal bleeding from the uterus, cervix, or vaginal mucous membrane. The patient presented a clinical picture indicative of marked respiratory embarrassment and

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vasomotor collapse seemingly due to the drug administration. Her face appeared pinched and drawn. Her lips were cyanotic and the heart sounds were rapid but regular. Respiratory excursions were shallow and barely perceptible. The pulse was thin and of poor quality. The fingernails were cyanotic, and the extremities were cold and clammy. When seen in consultation by one of us (A. A. L.), it seemed that death was imminent.

The patient was treated for shock by means of intravenous glucose and saline therapy, elevation of the foot of the bed, heaters and blankets, and coffee was administered by rectum. In spite of these and other heroic measures, the response was poor. The symptoms and blood pressure—systolic 76 and diastolic 60—remained the same. It was then deemed advisable to attempt respiratory stimulation by the inhalation of a carbon dioxide mixture. The patient showed little reaction even to this, apparently because of the shallow inhalations. Three cc. of coramine was then administered intravenously and intramuscularly. Within three-quarters of an hour from the time this medication was given, the patient became conscious. She was able to converse with the attendants. Her respiration improved. The cyanosis slowly disappeared, and the blood pressure rose from 76 systolic and 60 diastolic, to 108 and 78 respectively. Following this experience, the patient made an uneventful recovery, appearing quite normal twelve hours later. The puerperium was without event.

A medical consultation was obtained during the course of the treatment. The opinion coincided with that of the obstetrical consultant that the reaction was perhaps due to the drugs administered, probably those of the barbituric acid group.

The group studied consisted of forty consecutively admitted patients who had received nembutal and paraldehyde in the routine manner. This was divided into one group of twenty patients who were given coramine and a second group of twenty patients who served as a control. The two groups were comparable as far as age, parity, race, and color were concerned. Five cc. of coramine was given intramuscularly after the third stage of delivery had been completed. The average patient had in the meantime reacted from the mild ether anesthesia which was administered. The blood pressure, pulse, and respiratory readings were taken at this time and repeated every fifteen minutes for the first hour and twice during the second hour. The depth of ether anesthesia and narcosis, the degree of amnesia, and the extent of motor activity were noted. The time from the end of the third stage to consciousness was charted in each case.

RESULTS

Significant differences were obtained between the two groups when the average time of recovery of consciousness was computed. It was seven hours and forty-eight minutes for the control group and five hours and forty-five minutes for the coramine group. The average dosage of nembutal and paraldehyde administered was practically identical, being 4.4 grains of nembutal and 5.1 drams of paraldehyde for the control group and 4.7 grains and 4.5 drams respectively, for the coramine group. (Table 1.)

TABLE 1

Patients	Cases	Nembutal	Paraldehyde	Time
Controls	20	4.4	5.1	7 Hrs. 47 Min.
Coramine study	20	4.7	4.5	5 " 45 "

The consensus of those closest (i.e., nurses and attendants) to the patients was that fewer catheterizations were necessary for the coramine treated group. This may be attributed, perhaps, to the decreased time of postpartum narcosis.

A study of the pulse, respiration, and blood pressure revealed that the type of response to coramine is a matter of uncertainty. In twenty-five per cent of the cases the pulse, respiration, and blood pressure were raised. In an additional twenty-five per cent they were slightly lowered, while in fifty per cent they remained unchanged. Whether this latter seventy-five per cent would have shown a negative or positive response with additional coramine is problematical. No other noteworthy observation was made which could be ascribed to the use of coramine.

SUMMARY

1—A study of the applicability of coramine in decreasing the time of postpartum narcosis was made.

2—One-half of the group of forty mothers received five cc. of coramine intramuscularly after the third stage. The remaining twenty patients were used as controls.

3—The length of narcotization after the third stage was decreased from an average time of seven hours and forty-eight minutes to five hours and forty-five minutes in the coramine group.

4—A patient "in extremis" after administration of nembutal and paraldehyde recovered after treatment with coramine.

5—The effect of coramine on respiration, pulse, and blood pressure in our series was variable.

6—Coramine is no doubt of value as a respiratory stimulant when the respiration is so depressed that the patient cannot "breathe in" carbon dioxide oxygen mixtures.

CONCLUSION

The intravenous or intramuscular administration of coramine can decrease the duration of postpartum narcosis due to barbiturie acid drugs. This requires further confirmation.

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THE PERSONALITY OF THE PHYSICIAN*

BY JOSEPH H. PRATT, M.D.†

THE privilege of appearing before the students of this famous medical school as a lecturer in this annual course on the "Care of the Patient" is appreciated by me as it should be by any practitioner. The invitation, however, carried with it a special responsibility as the standard set by my predecessors has been so high. It has presented me with the opportunity and also the duty to devote considerable time to meditation in order that I might offer bread rather than stones. This task of preparation has been a pleasant one and has brought to mind happy memories. From the day I received the invitation from Dr. Locke there has been frequently in my thought the picture of one we have loved and lost, Dr. Francis W. Peabody. The delightful address he delivered from this platform on the "Care of the Patient" has given to this course a special distinction. That essay should be read and reread by all medical students.

Only a month before Dr. Peabody accepted the invitation to lecture in this course it was discovered that he was the victim of a fatal disease and he had been told the truth. He showed the stuff that was in him by acceptation of the situation and he went quietly about the daily business of living in a spirit of equanimity, without haste and without waste of time or thought.

When I was told of the shocking discovery made at the operating table I also learned that he was back at Northeast Harbor busy at his research work. He was engaged at the time on a fruitful study of the bone marrow in the anemias. Knowing he would not want sympathy but help I wrote at once and asked if I could not look up in the library some of the references he might wish to consult and prepare abstracts for him. In reply he wrote, "I am still poring over the microscope, but if any problems arise that want looking up I shall call on you."

Dr. Peabody's lecture dealt chiefly with the care of that large and neglected group of patients whose physical symptoms such as pain in various parts of the body, exhaustion and indigestion are the result not of organic disease but of a functional disturbance brought about by worry, fear and other forms of troubled thought. These are the patients who after a thorough physical examination are often blithely told by their doctor that there is nothing the matter with them. As regards the symptom for which they sought relief, they are told to forget it. It is all so simple and usually so ineffective. This reassurance, it is sad to relate, is about the extent of the psychotherapy still practised by the average physician. It may be that at the very moment the doctor is giving the advice to forget it the poor patient is racked with pain or is so dizzy he can scarcely stand. Is it any wonder he turns in despair to Christian Science or to osteopathy? He knows he is sick in spite of the calm and cheerful assurance of the doctor to the contrary. The irregular practitioner, ignorant though he be of any knowledge of the body and its disease, inspires in the patient faith in the treatment offered, no matter how absurd it may be. The result is that his fears are often soon dispelled. With agitation removed from mind and spirit the brain no longer sends out jangling impulses to all parts of the body, the symptoms vanish and the patient feels well again. He is not only cured but he is profoundly grateful to the man or woman who healed him. The stately temple to Mrs. Eddy and her pseudoscience on Huntington Avenue is a visible testimonial to this fact and it is also a monument to the failure of the medical profession in New England to treat successfully the victims of the psychoneuroses.

From Peabody's lecture the student learns a truth that wise Ernst Wagner stated many years ago, namely, that we do not treat diseases but sick human beings. Flowing through Peabody's talk to students is a kindly spirit that came from his understanding heart. He shows clearly that it is not enough to search for evidence of organic disease by the most modern and scientific methods. If the scientifically trained physician stops his investigation when

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he is satisfied that symptoms are not due to organic disease he is contented with a half truth and is not scientific enough.

The subject that I wish to discuss with you this hour is the personality of the physician. No more fitting illustration of what the doctor should be can be found than that presented by my friend and pupil Francis Peabody.

For years prior to the day I heard Peabody's address on the "Care of the Patient" I had been a follower of Dejerine, the great French neurologist, whose simple common sense methods of psychotherapy I had employed with gratifying success. After the lecture I talked with Dr. Peabody in that anteroom at the left of this amphitheatre. His address doubtless made a deep impression on the audience but there was no evidence of unusual approval. In a few minutes the hall was emptied and we were alone. In answer to my inquiry he then told me that it was not Dejerine who had stimulated his thought during the preparation of his address but Dejerine's English disciple, T. A. Ross, whose book on the "Common Neuroses" Peabody held in the esteem it deserves. May I take this opportunity to urge you to read both authors. Dejerine's work on the psychoneuroses and psychotherapy translated by Jelliffe is unfortunately out of print. It is, however, still available in the original French. (*Les manifestations fonctionnelles des psychonéuroses.* Masson et Cie, Paris, 1911.)

The last year of Dr. Peabody's life has been beautifully pictured in the memoir written by his father. There was no fight to escape from the dark valley into which Peabody saw himself rapidly swept. During the summer of that year I visited him in the quiet of his walled garden, and when the weather became cooler, within the pleasant house. This had been the home of William James, the very place in which the Gifford Lectures on the "Varieties of Religious Experience" had been conceived. He talked about my work and his work as if he had no expectation that his work was almost finished. He gave close attention to my plans for developing a clinic for advanced instruction in internal medicine and offered valuable suggestions. He approved fully of my idea of bringing selected assistants from the best clinics in Germany to my little clinic at the Boston Dispensary, and saw clearly the advantage it would be to American students to rub elbows for a while with the best type of German assistants trained in the clinics of Krehl, Grafe, and Morawitz. Only once did I hear him express any regret at the blotting out of his own plans for the future. Then he simply said, "Oh, if I only had five more years to complete my work," meaning the full development of his clinic and laboratory at the Boston City Hospital. All I could say in reply was the well-known quotation, "It is better to travel than to arrive."

When his essay on the "Care of the Patient" was published in attractive format by the Harvard University Press, he sent me a copy. On receipt of my note of thanks for the gift he wrote me the following letter. It is written with a pencil and the lines slant.

> "There is no one whose approval of this little book I would rather have than yours—'my scientific godfather'. Many thanks for your note. I hope the little sermon may do some good. My great desire has been to have a medical clinic in which the highest type of scientific work was carried on in conjunction with the most human and sympathetic attitude toward the patients—a type of spiritual atmosphere that may be expressed by the word 'Christian'. (Of course I mean the true spirit of Jesus as expressed in the Gospels and not the so-called Christianity of the Evangelical churches.) It might be called a Christian-Science Clinic. Best of all I think I see the germs of it developing. After all, such is the best background for good scientific work."

He possessed that fruit of the spirit extolled by Osler under the names of imperturbability and equanimity. In addition to this he had acquired a closely related and even higher virtue in the scale of values which Saint Ignatius in his spiritual exercises termed indifference, meaning thereby that quality of mind and spirit characterized by the ability to live on a level higher than that of a mundane existence. At the same time he was so detached from any trace of self-pity or even self-centeredness, that he could throw himself wholeheartedly into his writing and the work of his assistants as well as into the activities of his family and friends, so far as he was physically able. There was a mastery of self that impressed everyone who talked with him as most unusual. It was in truth a fine variety of cheerful religious feeling which this man of science experienced during the fifteen months when he found himself sitting face to face with death. When the end was near he was able to look back on the year and say that it was one of the happiest of his life. There was an apparent dissociation taking place between mind and body. As he grew weaker physically his thoughts seemed to become clearer and even more vigorous. "In rare moments of self-disclosure he would speak, as if casually, of the approaching end. 'This is not so bad,' he said one day, 'as most people think.' 'It is like leaving behind one an old suit of clothes.' * * * And yet again, when the talk turned to religion: 'It is a very simple thing. It just comes down to; 'He that loseth his life shall save it!' So, without access of suffering or crisis of disease, the tired body at last surrendered to the unwearied mind and unconquered will." (Francis G. Peabody.) The

courage and cheerfulness with which he met disease and death were an inspiration to those who were privileged to call upon him during his illness. His friends left his presence uplifted and glad that here was a man for whom death had no sting. With him the victory of death was a triumph for the victim.

The first mental picture I have of Peabody dates back to the fall of 1906 when he was beginning his senior year in this school. I had offered that year for the first time a course in clinical research as an elective for fourth year students. I secured for a laboratory a room on the top floor of Building C. It was the first term of the School in its present location. Funds for this laboratory were willingly supplied by my chief, Dr. Reginald H. Fitz, and a "Diener" supplied. The word "Diener" was the term by which a laboratory assistant was known in Dr. Welch's Baltimore laboratory and also in Dr. Councilman's here in Boston. I mention this as indicating how dominating in American medical science at that time was German influence.

Peabody, perplexed as to what he should study during the final year of his medical course and uncertain as to his future, visited Prof. Fitz at his Manchester home for advice. Dr. Fitz told him of my new course in clinical investigation and advised him to take it. I know Peabody consulted at least one other man, an eminent laboratory investigator, who expressed doubt whether I would be able to devote time enough to the proposed study to justify the sacrifice of the excellent clinical opportunities that would be lost if even a month were spent in laboratory research.

Only recently I learned from Prof. Peabody's biography of his son that Dr. Fitz had difficulty in obtaining the consent of the faculty to my new enterprise. It was without doubt generally felt by the clinical teachers, with the exception of Dr. Fitz, that it was a foolish undertaking because the view was then held that laboratory science played a mighty small part in the practical training of future practitioners. What had a laboratory research in bacteriology to do with the practice of medicine? The students had had the first two years of their course devoted to the laboratory, what they needed in the fourth year, most clinical teachers held, was not laboratory work but every bit of clinical instruction they could get. At the time of which I speak there was a great gulf fixed between the scientists and the clinicians in this school.

I mention this incident in such detail to show that it took courage for Peabody to follow a course that must have been frowned upon by every clinician he consulted excepting Dr. Fitz. We took a bare room in the newly opened buildings and fitted up a bacteriological laboratory. The problem assigned to Peabody was to isolate typhoid bacilli from the dejections of typhoid patients by the use of new methods. The program I proposed to him would have repelled most students. He had to go from his home in Cambridge each morning to the Massachusetts General Hospital and there gather up the collected feces of typhoid patients and bring them out to the school. The distance from the Massachusetts General Hospital to Longwood Avenue seemed much longer in those days when one had to travel by electric cars. Arriving at the school he had to make all the culture media, and to do all the work aided only by an untrained laboratory boy. He completed the research and we published it under our joint authorship, first in German in the *Centralblatt für Bacteriologie*, and later in English. Strange to relate the work yielded to him results of practical importance that we did not anticipate. The knowledge gained of the bacteriology of the typhoid bacillus enabled him, while an interne at the Massachusetts General Hospital, to isolate this micro-organism from the blood of the ear in all of five cases of typhoid fever admitted during the first week of the disease. Knowledge of what he had accomplished in the matter of early diagnosis spread rapidly. As a consequence while yet an interne he was asked to present the results of his hospital study before the Section of Medicine of the American Medical Association. This he did at the meeting in 1908. I can recall no other interne who has reported original work in clinical medicine at a meeting of our national society.

Peabody's gratitude to me for starting him on investigative work was far greater than I deserved, and time did not lessen it. Although he stood first in his class in the medical school he confessed to me years later that he felt no enthusiasm for the work during the first three years and that he lived laborious days simply from a sense of duty. In a letter written after the onset of his last illness he stated that it was I who first showed him "the joy and satisfaction of seeking new truths". In looking back over my life it is a source of pride to know I had some part in the education of this distinguished physician. At the same time I recognize the truth that all I did for Peabody was to act as a transmitter of something I had received in abundant measure from my own masters in medicine. Goethe in his conversations with Eckermann brought out the point clearly that when a man deducts the debts he owes to great predecessors in his field of work and to his own teachers and fellow-workers there is not much left that he can call his own. In my own case I know this is true. The happiness and satisfaction in my life work have been due to my

good fortune in being closely associated with a series of great men during my formative years who stamped me with the impress of their strong personalities. Three men who instilled into me a genuine love of medical investigation were teachers in this School, Dr. William T. Porter, Dr. William T. Councilman, and Dr. Frank B. Mallory, and I am glad of this opportunity to express my indebtedness to them.

You may be surprised to know that at the time I entered the Harvard Medical School, Yale graduates were more highly favored than those from across the Charles. That is, if they had taken, as I had, the course in physiological chemistry given by Prof. Chittenden, the first man to establish in America a laboratory for physiological chemistry.

At our introductory lecture in physiology the announcement was made by Prof. H. P. Bowditch that if any members of the entering class had taken Prof. Chittenden's course they would be excused from the regular work in physiological chemistry but would be expected to do special work in physiology in his laboratory. There I met the young assistant professor of physiology, Dr. William T. Porter. He took me through the well-equipped laboratory and showed me different forms of the elaborate apparatus used in his researches. Then he told me I could work with him on any one of three problems which he explained, each requiring for its solution different types of instruments. He added that if we got results worth reporting, we would publish them jointly. The intimate association I enjoyed that year with Prof. Porter was of great value to me. When I began to work with him I looked upon the original investigation we undertook simply as furnishing an opportunity to learn how to tie ligatures rapidly and securely, and to keep clean the field of operation by proper sponging. My ambition at that time was to be what Dr. Oliver Wendell Holmes called "a drawer of blood and a hewer of members". In the course of time Dr. Porter aroused my curiosity and I became interested in the experiments. He was making important studies on the work of the heart, a continuation of the fine Arbeit he had published in *Pflüger's Archiv* two years before. Through him I sensed the dignity of scientific research as exemplified by Heidenhain and his assistant Hürtle under whom Dr. Porter had worked in the Breslau Laboratory. His description stamped a picture on my mind of Heidenhain walking to and fro on the shaded path in the park which adjoined his laboratory, buried in thoughts bearing on the investigations in progress. From Dr. Porter's enthusiasm I gained some slight intimation of the joy of creative work. Following the path on which he started me I discovered later the fun that comes from exploring the unknown.

The man whom I look upon as my father in medicine was also a professor in this school—Dr. William T. Councilman. I was his assistant for four of the happiest and most profitable years in my life. From the day I first worked in his laboratory to the very end of his life he was a loyal friend and always willing to help with wise counsel. Great in science he was still greater as a man. Read Cushing's sketch of him for there you will find a faithful picture of a strong and delightful personality. He was a modest, kindly, vigorous man with an open mind, who loved nature and his fellow man. To his students he brought the inspiration and knowledge he had gained from his own great masters—Martin in Baltimore, Conheim in Leipsic, and later Welch, who regarded Councilman as his dearest friend. His every thought and act were honest and sincere. He worked for the good of this school and for the good of his assistants and never for selfish ends. In the last decade of Mr. Eliot's régime Dr. Councilman's clear vision and unselfish labors did much to elevate this school toward the eminent position it occupies today in the world of medical education and research. Largely through Dr. Councilman's efforts the barrier of prejudice and misunderstanding which existed between the laboratory and the clinic in this university was broken down.

When Councilman arrived here from Johns Hopkins he found a young assistant in the department by the name of Mallory whom he recognized as a man of exceptional ability. Soon Mallory became his right-hand man and they worked together for many years producing a series of important monographs on diphtheria, cerebrospinal meningitis and other subjects. When the fine new pathological laboratory of the Boston City Hospital was opened in 1896 Dr. Mallory was placed in charge of it. In June of that year, having just completed Dr. Welch's course in pathology at Hopkins, I began to work in this new laboratory and then first came in contact with Dr. Mallory. His name was already well known to us in Baltimore, and we had heard Dr. Welch say that Weigert in Germany and Mallory in America led the world in the technique of pathological histology. For two years following my graduation I had the good fortune to work under Dr. Mallory and to be one of the earliest of that long line of young men who have had the benefit of his personal instruction in observation and in the preparation of organs and tissues in such a way that careful observations of microscopic details were possible. That was the best kind of so-called elbow teaching. He influenced us more by example than precept. Most investigators when placed in charge of a large laboratory degenerate into administrators and organizers of the actual work which is done by assistants. Not so Mallory. From the day I first met him in the laboratory until the present I

have always found him busily at work unraveling the secret of the histological or gross specimen before him. The impact of his personality upon that of his assistants is as great as any man I have ever known. He created a definite school in pathology, and without conscious effort impressed his methods and his point of view upon his pupils. His enthusiasm for his work has never waned and it has a contagious quality about it that few can resist. His problems seem to exhilarate him and I feel sure that his attitude of mind toward his work has made it an engrossing pursuit compared with which the amusements of ordinary men would be dull indeed.

When discussing the particular problem upon which he is engaged he conveys to his hearer the feeling that nothing could be more interesting than its solution. Long may he live to work in the noble institute of pathology that bears his name.

The addresses given to preceding classes by the lecturers in this course have been of such value to student and practitioner alike that they have contributed distinction to the daily work of the physician. They have tended to raise the dignity of the art of medicine and in so doing have filled a need. Not a few of the ablest graduates of this school in recent years have felt during their interne days that the worst thing that could happen to them would be to earn their living by private practice; so great has been the lure of laboratory and teaching clinic.

Some of the lectures in this course have been collected and published in a volume entitled "Physician and Patient." Busy with prescribed studies it is possible that some of you have not read this helpful book.

Within recent years the study of personality in its relation to medicine has been revived and it appears that the old humanities and the new sciences are to be united. If so, Plato and Aristotle may once again join Hippocrates and Galen as the fathers of medicine. My old teacher, Prof. Krehl, in a recent address on personality and disease-forms says that while the medicine of the recent past rests on natural science as its sole foundation, that of the future will undoubtedly be built partly on natural science (*Naturwissenschaft*) and partly on psychology, metaphysics and ethics (*Geisteswissenschaft*). This statement which may sound revolutionary should carry weight for it is made by that undoubted leader in clinical medicine and pathological physiology, Ludolf Krehl. The great pioneer in this new field of medical investigation dealing with the relation of personality to disease is no less a man than Friedrich Kraus of Berlin from whom in his early years your dean, Dr. Edsall, obtained light and leading. Kraus's first studies on personality as it relates to clinical investigation appeared more than a quarter of a century ago. Since his early work important studies on personality and character in their relation to medicine by himself and by others have been coming from the press in increasing number. A new science, characterology, like a new star in the firmament, has appeared. The word "characterology" is not listed even in recent English dictionaries except the latest, the 1934 edition of Webster's International.

Professor Krehl in the last edition of his famous work on pathological physiology stresses the importance of personality in the study of the sick man. The man is a unit, he says, meaning a psychophysical entity, and this man is sick. You as practising physicians will be dealing always with a personality in the form of your patient who is being acted upon at the time he seeks your aid by some external or internal disturbing force. For example, the external disturbance may be a nail in the foot or, the internal disturbance, one caused by an ulcer of the stomach or painful thoughts. Let me take the first of these examples to make my meaning clear. The patient has a nail in his foot. He pulls it out himself. Why does he come to the doctor? Very likely because he fears infection; possibly lockjaw. Your whole duty as a doctor does not end in giving him antitoxin. It is equally your duty to remove from his mind the fear produced by this injury to his body.

The problem of determining what is disturbing the personality of your patient presents itself every day at the bedside of every patient to every practitioner. Each problem is different and no matter how long you practise the healing art the same problem is never repeated, for the same personality is not found twice in the same state of being and subjected to exactly the same disturbing irritant. Krehl believes that when pathological physiology has advanced sufficiently to explain the effect of injury upon personality, pathological physiology will become a part of the *Geisteswissenschaft*.

It is well to remind ourselves from time to time that the word cure comes from the Latin *cura* and the cure of the patient originally meant simply the care of the patient. "The priest had the parish for his cure, the physician the sick for his." (James Jackson.) In this original sense we should continue to cure our patients until they recover or until death closes the scene. Toward the end of a fatal illness the family of the patient may need our cure more than does the one who is dying. The importance of caring for the patient to life's end has been emphasized by one who has previously lectured in this course, our beloved Dr. Alfred Worcester, a man who practises what he preaches.

The ancients rightly styled man a microcosm or little world within himself. The advances made in psychology have emphasized the truth of

this old view. Back of our conscious minds is the undiscovered country of the unconscious. Man has prided himself that he is guided by reason. One period of history called itself the age of reason. The truth is quite otherwise. Modern psychology teaches that the color of our thoughts and the motive power behind our actions are more influenced by the emotions than the reason. Of this drive of the affects we are usually quite unconscious. Man's free will to think and to act is inhibited or strengthened by the impulses resulting from a multitude of influences inherited or acquired. Often in us some virtue or vice passed on by an unknown ancestor lives again.

Fortunately environment has great influence in directing and strengthening native gifts. The impact of the personality of a great teacher on the personality of his students and disciples has wrought wonders in transforming lives and creating powers which some students in turn have been able to pass on to others. This transmission of spiritual and intellectual energy has been exhibited many times in the course of medical history. The seed sown by an inspired teacher often falls on sterile ground, it is true, but when it lodges on fertile soil it may bring forth a hundred fold.

In the favoring atmosphere of this medical school the personality and character of the carefully selected group that have the privilege of studying here should grow apace if you that make up the student body are receptive to the good influences that are acting upon you. These influences are like radio waves and to perceive them you must have a recording apparatus that is correctly tuned. True success as a physician is largely dependent on personality and character. In the sick room what you are may speak so loud that the patient cannot hear what you say.

The real Harvard Medical School does not consist of these stately marble buildings. They are simply the outward sign of the real medical school which is a house not made with hands. Its builders have been those master minds of medicine who have lived and labored for it since the foundation in 1783.

The Father of the Harvard Medical School, John Warren, possessed a personality of a very high type, and the record of his life is an inspiring one. "That we may do justice to his fame," said James Jackson, "let us make it useful as was his life. Let us all, and particularly his professional brethren, strive to imitate his virtues." You can learn to know the real man by studying his biography written by his son Edward Warren. No teacher was ever more self taught than John Warren, and few have had more obstacles to overcome. His plan to form a medical school aroused the active opposition of all the leading physicians in Boston. They so misunderstood the man that in his efforts to help students they saw only an attempt at personal aggrandizement. They showed their resentment. The unanimous vote of the local medical society prevented Dr. Warren from giving clinical instruction in any hospital from the founding of the school in Cambridge in 1783 until its removal to Boston 1810, a period of twenty-seven years. As a result the school in Cambridge was a poor weak thing. There were few students and usually only one graduate a year; never more than two. Not only were his motives wrongly interpreted by his fellow practitioners in Boston with the result that they became as a group hostile to him and to the School but his medical colleague in the faculty of three, Dr. Benjamin Waterhouse, became his enemy. It is sad indeed that Dr. Waterhouse, a man gifted by nature and equipped with the best medical education of any American of his generation should have been blind to Dr. Warren's virtues. His antagonism against Warren grew with the years until it finally led to inexcusable acts which resulted in his dismissal from the school. We have the testimony of James Jackson that Warren's nature "was ardent, most affectionate, most generous. Fair and open himself, he learnt to distrust others only from experience."

Soon after John Warren entered the army at the outbreak of the Revolutionary War his ability attracted the attention of Dr. John Morgan, the Surgeon-General. Although a very young physician, Warren was placed by Morgan in charge of military hospitals, first on Long Island and then in New Jersey. Two years after his promotion to the rank of hospital surgeon, Morgan's successor, William Shippen, appointed Warren chief of the army hospital in Boston, a position he held until the end of the war. The opportunities thus furnished for the study of anatomy and surgery enabled Warren to develop his rich talents.

Not only were Morgan and Shippen the founders of the first medical school in America, which later became the medical department of the University of Pennsylvania, but through the aid and support given John Warren, may be truly regarded as the grandfathers of the Harvard Medical School.

When John Warren began his life work in Boston he alone was actively interested in medicine as a science. We have the testimony of a contemporary, Ephraim Eliot, that the Boston physicians were jealous of one another and like oil and vinegar they would not unite. "They did not love each other," says Eliot, "and all were determined to put down Warren; but they could not; he rose triumphant over them all."

John Warren fortunately lived to see the establishment of a vigorous medical school in Boston with an harmonious faculty. His eldest son, John Collins Warren, together with another

young man, James Jackson, carried on the work John Warren had begun. John Collins Warren succeeded his father as professor of anatomy and surgery and like him became the leading surgeon in New England.

The Massachusetts General Hospital is the realization of John Warren's dream. It was he that secured an initial bequest from William Phillips to be paid to the trustees "as soon as they shall determine to begin the work". Unfortunately John Warren did not live to see even the laying of the corner stone, which was done with much ceremony three years after his death. On entering the old Bulfinch Building of the Massachusetts General Hospital it is well to call to mind the memory of two men, John Collins Warren and James Jackson, who, inspired by John Warren, founded the hospital by their joint labors. These two men who did so much for this school, for the Massachusetts General Hospital, and for the elevation of the medical profession in this country, have shown their personalities in their published works, and in their writings their spirit survives. Dr. Jackson still lives in his Memoir of James Jackson, Jr. and the "Letters to a Young Physician" and Dr. J. C. Warren in his biographical notes which are incorporated in the biography prepared by his brother. They brought to this medical community a spirit of peace, unity, and concord. Writing in 1867, Dr. Oliver Wendell Holmes said, "No man ever did more, if so much, as Dr. Jackson to produce and maintain the spirit of harmony for which we consider our medical community as somewhat exceptionally distinguished. If this harmony should ever be threatened I could wish that every impatient and irritable member of the profession would read that beautiful, that noble Preface to the 'Letters' addressed to John Collins Warren. I know nothing finer in the medical literature of all time than this Prefatory Introduction." This spirit of harmony still characterizes our medical community nearly seventy years after Dr. Holmes wrote the words quoted. Let us do honor to the men who first exhibited it here, John Warren, John Collins Warren, and James Jackson.

The men I have selected to illustrate the qualities of heart and mind that make the personality of the physician successful in his profession have all contributed much to this school. The more you study their lives the greater will be your admiration for them. It is my hope that you may make them your friends. In the library they, through their writings, are always ready to instruct you. Learn of them. In gaining instruction you may, I trust, also receive inspiration. In developing your own personalities you would do well to imitate the virtues of the succession of physicians from John Warren to Francis Peabody who have labored here for the advancement of the science and art of medicine.

ABDOMINAL COMPRESSION AND VAGINAL TAMPONADE IN THE TREATMENT OF ABRUPTIO PLACENTAE*

BY ROY J. HEFFERNAN, M.D.†

ABRUPTIO placentae is one of the major catastrophes of obstetrics. As soon as the diagnosis is made or *suspected*, the patient should be hospitalized. Watchful expectancy, an admirable policy in many abnormal obstetrical conditions, has no place in the treatment of premature separation of the placenta. Measures should be promptly instituted to (1) control hemorrhage, (2) improve the patient's general condition, and (3) empty the uterus. As soon as an abdominal and pelvic examination has been made, if the patient is bleeding, externally or internally, a firm Spanish windlass should be applied to the abdomen with a tight T-binder to the perineum, and morphine sulphate, grain ¼, administered subcutaneously. This simple procedure, advocated years ago by the Dublin School[1], usually stops the hemorrhage and permits a careful unhurried analysis of the case, so that the safest type of delivery may be selected.

Meanwhile the acute anemia or shock so often present should be relieved by blood transfusion, external heat, and glucose or saline solution by vein and hypodermoclysis. Needless to say no active operative intervention should be attempted until the patient's general condition warrants it.

In recent years cesarean section has been advocated as the best treatment for the bleeding complications of the third trimester of pregnancy, namely placenta previa and abruptio placentae. For most cases of placenta previa this is good practice. In this condition delivery through the pelvis is fraught with greater danger to both mother and baby. Rupture of the uterus and extensive lacerations of the vascular friable cervix may occur in the best hands. In abruptio placentae, however, the integrity of the lower segment and cervix has not been compromised and the conservative management of more of these cases is desirable. Unquestion-

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ably, if the parturient is at or near term with an undilated cervix, the baby alive, and symptoms of severe abruptio placentae, an abdominal delivery is indicated. Again, if the symptoms are sufficiently severe to warrant a diagnosis of uteroplacental apoplexy, with hemorrhagic infiltration of the myometrium (the so-called "Couvelaire uterus")[2], a cesarean should of course be performed, followed by hysterectomy if the uterus will not contract[3].

However, if the symptoms are less marked, or occur many weeks before term, so that the baby is very premature, or dead; or if the patient is extremely toxic or anemic, and not a good operative risk; or if labor has started so that there is some dilatation of the cervix, the application of a firm Spanish windlass, with a tight vaginal tamponade or Voorhees' bag, supplemented when necessary by blood transfusion and other supportive treatment, will usually result in the completion of the first stage of labor with very little additional hemorrhage, so that delivery through the pelvis may be safely accomplished. Before packing, the patient should be prepared with scrupulous care and the bladder emptied. If narrow (one inch) iodoform gauze is not available, plain gauze may be used after a thorough soaking in two per cent aqueous solution of mercurochrome. The cervix and vagina should be packed as tightly as possible.

These points can best be illustrated by describing briefly the following cases:

CASE 1. Mrs. J., aged 25; para 2.

First pregnancy interrupted three weeks before term for severe pre-eclamptic toxemia. The last period was January 11, with the expected date of confinement October 18. In June and July the patient showed a slight trace of albumin in the urine and the blood pressure rose from 120/70 to 144/94. On August 15, while working about the house, the patient felt a sudden sharp pain to the left of the umbilicus, began to flow, and felt faint. When seen at her home a short while later, the patient was flowing profusely, passing large clots, and the abdomen was firm and tense; pulse 96, blood pressure 134/88. A firm Spanish windlass and T-binder were applied, a quarter grain of morphine sulphate was administered, and the patient transferred to the Carney Hospital. The cervix was found to be one finger dilated and half effaced. The cervix and vagina were firmly packed with narrow iodoform gauze, and the Spanish windlass continued. There was no further bleeding. One hour later active labor started, and after five hours the pack was removed and a 3 lb., 1 oz. baby delivered, followed by the placenta, which showed the characteristic depression filled with old blood clot. The uterus contracted well and the patient made an uneventful recovery, returning to her home in twelve days. The baby gained slowly and was discharged in four weeks.

CASE 2. This is interesting because trauma was apparently the cause of the separation.

Mrs. N., aged 25, a primipara, had her last period January 26. Blood pressure and urine were normal for four months. On June 20 the patient was in an automobile accident and sustained a severe blow on the abdomen. She had considerable abdominal pain, with moderate flowing, which subsided after three days, during which the patient was confined to her bed and received four injections of morphine sulphate, grain one-sixth. After the fourth day, the patient was allowed to be up and about; there was an occasional slight showing and three weeks later the abdominal pain recurred with profuse flowing. This subsided promptly under the treatment outlined above. Five weeks later the patient had a similar experience. The general condition remained good, blood pressure remained normal, and urinalysis was negative. There was slight staining with occasional flowing, off and on, until September 4, when a profuse flow with clots made it necessary to transfer the patient to the Carney Hospital. The fundus was two fingers above the umbilicus, the fetal heart right and below, rate 144, the cervix one finger dilated. The pulse was 108, blood pressure 110/64, the red count 3,200,000, with hemoglobin of 60 per cent. A firm Spanish windlass was applied and a number 5 Voorhees' bag inserted in the cervix. All bleeding stopped immediately. In one-half hour labor pains started, and the bag was expelled three hours later. A 2 lb., 3 oz. baby was delivered by breech extraction. It expired after three hours. The placenta showed a characteristic punched-out area four inches in diameter extending to the margin of the placenta, and a considerable amount of old blood and blood clots was expelled. The uterus contracted well and the patient was discharged in good condition except for a moderate secondary anemia, on the fourteenth day.

CASE 3. Complete separation with internal concealed hemorrhage.

Mrs. P., aged 45; para 12. Nine children living and well. All previous deliveries normal. The expected date of confinement was November 25. On November 7 the patient fell on the cellar steps and struck her left side. After resting awhile she felt well and continued to do her housework. She had no pain or bleeding until the present date, November 10. Early that morning she went to the bathroom, and while voiding felt something "drop" in the lower abdomen, but experienced no pain. Shortly after this she fainted. Thinking that this was due to hunger, she ate some food, but fainted again shortly after. She returned to bed and fainted again. She then began to experience pain in the right side of the abdomen, and felt nauseated and weak. She observed that her abdomen was increasing in size and said she felt as though the fetus were being pushed upward. In the afternoon she called Dr. Fred Costanza, who found her in shock, her face ashen white and drawn, the abdomen tense and boardlike, with the blood pressure 100/60 and the pulse rate 100, of poor quality. There was no sign of any vaginal bleeding or staining. She was transferred to the Quincy Hospital, and I saw her in consultation a short while later. The general condition was as stated above, the r.b.c. 2,000,800; w.b.c. 14,000; hemoglobin 60 per cent. The abdomen was tremendously enlarged, with a rounded mass larger than a fetal head, projecting from the upper part of the fundus. The cervix was one finger dilated and well effaced, the membranes were intact; there was no bleeding and no evidence of blood serum in the vagina. A firm abdominal binder was applied and the vagina packed tightly with iodoform gauze. Seven hundred cc. of blood were given by the citrate method, and 1000 cc. of five per cent glucose and saline solution administered by hypodermoclysis. The patient's general condition improved and four hours later the pack

was removed and she delivered spontaneously a 6 lb. still-born fetus, immediately followed by the placenta, the entire surface of which was covered with old and new blood clots. Apparently there had been a complete antepartum separation of the placenta. Several very large old clots, sufficient to completely fill a large basin, were expelled and a moderate postpartum hemorrhage occurred. This was checked by pituitrin and ergot, after which the uterus contracted well. Six hours later the pulse had risen to 140, was of poor quality, the patient felt nauseated, and the blood pressure had dropped to 84/40. Another indirect transfusion of 600 cc. of blood was given, and the patient made a slow but steady improvement, and was discharged in fair condition on the fourteenth day.

CASE 4. Mrs. M., aged 33; para 3.

First baby was delivered with high forceps and died five hours later. Second baby was hydrocephalic, and delivered at the eighth month. The last period was October 15, probable date of confinement July 22. The pregnancy was normal until the eighth month when a slight trace of albumin appeared, with a few headaches and moderate edema of the ankles. The blood pressure remained normal. On June 12 she was awakened at four o'clock in the morning by a feeling of abdominal discomfort and backache. On going to the bathroom she observed that she was flowing profusely. Violent fetal movements were noted, which ceased completely after a few minutes. I saw her a short while later at St. Margaret's Hospital. The fundus was considerably larger than it had been four days previously; there was a steady moderate flow of bright red blood; the fetal heart could not be heard; the uterus was tense and firm and the abdomen tender. The cervix was two fingers dilated, and partly taken up. The patient looked drawn and pale, blood pressure was 104/56, the pulse 128, of poor quality. A firm Spanish windlass was applied and the vagina packed tightly with iodoform gauze. Five hundred cc. of blood was then given by the citrate method. The patient's general condition improved and the pulse dropped to 104. After two hours the patient's condition remained about the same, and as active labor had not started, she was given one minim of pituitrin every twenty minutes. After the second dose labor pains began and four hours later the patient was delivered of a 6 lb., 4 oz. stillborn fetus. The placenta had apparently undergone complete separation as it immediately followed the fetus, and the maternal surface was covered with clotted blood. A considerable amount of fluid and clotted blood followed the placenta. The uterus did not respond well to massage, intramuscular pituitrin and ergot, but after the injection of three minims of pituitrin, diluted with four cc. of warm salt solution, by vein, the uterus became firm and remained so. The patient made a good recovery and was discharged on the twelfth day.

CASE 5. Mrs. K., aged 37; para 1.

Last period July 12. Expected date of confinement April 19. March 14 the patient had no toxic symptoms, the blood pressure was 130/80, and urinalysis was negative. The fundus was three fingers below the ensiform, with the fetal heart left and below. Two days later the patient retired with a headache and a feeling of general malaise. At six o'clock the following morning she awoke to find herself flowing profusely. She was transferred to the Faulkner Hospital, where she arrived in a condition of shock, with a pulse of 130, of poor quality, marked pallor, and flowing profusely. The abdomen was firm and tender. No fetal heart sounds could be heard. The cervix was two fingers dilated, well taken up, with the vertex dipping into the inlet. A firm Spanish windlass was applied, the vagina packed tightly with gauze impregnated with two per cent mercurochrome solution, and glucose and saline given intravenously. After some delay in securing a donor, a transfusion of 700 cc. of blood was given. Labor had apparently started before the patient reached the hospital, and it progressed with very little further bleeding for eight hours. The patient's blood pressure had risen to 140/90, her color had improved, and the pulse was 96, of good quality. The pack was removed, cervix found to be five fingers dilated, and a 6 lb., 12 oz. stillborn fetus was delivered by mid-forceps. The placenta showed the characteristic changes of abruptio placentae involving more than half of the maternal surface. The uterus contracted well and the patient was returned to bed in fair condition. She made an uneventful recovery, except for a slough of the antecubital space which did not fully heal for two months. She was discharged from the hospital in good condition on the sixteenth day.

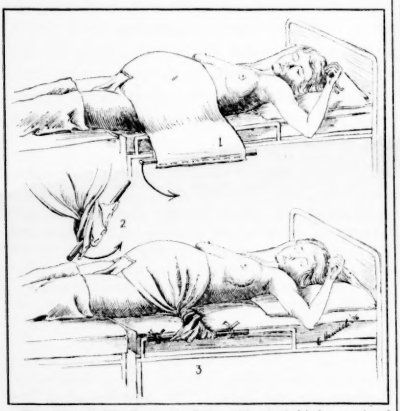
CASE 6. Mrs. C., aged 42; para 5.

First baby delivered by forceps, others normal. All previous children living and well. This patient was seen at St. Margaret's Hospital, in consultation with Dr. John A. Foley on May 14. During the past two months she had shown signs of a moderate pre-eclamptic toxemia, with a blood pressure ranging between 140/90 and 150/100, a small amount of albumin in the urine, occasional headaches and dizziness, and increasing edema of the feet and legs. The expected date of confinement was May 24. The patient had been in labor for four hours and was having regular pains every five minutes, lasting about forty seconds, when she suddenly experienced a sharp pain near the umbilicus, felt weak and dizzy, and fainted. Moderate flowing ensued, and the pulse increased to 118. The patient appeared pale and anxious, the abdomen was very large and suggested a multiple pregnancy. She complained of constant backache and dull constant pain in the abdomen. The uterus between pains was relaxed and not firm and tense, as it usually is with abruptio placentae. A fetal heart could be heard in the right lower quadrant at the rate of 136. Rectal examination showed a head engaged, with the cervix four fingers dilated, membranes intact. A firm abdominal binder and tight T-binder were applied, with immediate cessation of the flow. The patient's general condition improved, the pulse dropped to 104, and preparations were made for a blood transfusion. Gas was administered with the labor pains, which increased until in one hour they resembled second-stage pains. The cervix was then found to be fully dilated, and a 6 lb., 12 oz. child was extracted with mid-forceps. A second baby, which weighed 7 lbs., 1 oz., was then delivered by version and breech extraction. Both babies were alive and well. Under the usual stimulation the fundus contracted well and a large placenta, showing a depression four inches in diameter on the maternal surface, was expelled. The patient's general condition was fairly good, so that a transfusion was not given. She made a good recovery and returned home with her babies on the fourteenth day.

CASE 7. Mrs. C., aged 29 years. Para 1.

This patient was seen in consultation with Dr. Joseph McSweeney at the Somerville Hospital. The expected date of confinement was November 19. Two weeks before admission the blood pressure had risen to 140/100 and the urine showed a slight trace of albumin. There were no other symptoms, and the usual treatment for a mild toxemia was instituted. On September 29 the patient had a severe chill, but the temperature remained normal. Shortly after

that she noted a cessation of fetal movements, and developed a slight edema of the ankles, with occasional blurring of vision and headache. The urine showed a trace of albumin. On October 5 she experienced a sudden flow of blood, soon followed by the onset of labor pains. She noted that a gush of blood would occur with each contraction of the uterus. She was then transferred to the Somerville



The Spanish Windlass. 1. Long abdominal binder, perineal binder and wooden rod in position. 2. Tightening the binder by twisting the rod. 3. The Spanish Windlass applied.

Hospital. When seen, the pulse was 94, of fair quality; there was moderate pallor, blood pressure 150/110, with the fundus three fingers above the umbilicus, firm and tender, and the patient having thirty-second contractions every five minutes. There was a steady moderate flow of blood from the vagina, and the cervix was two fingers dilated and well taken up, with the vertex high. The fetal heart could not be heard. A firm Spanish windlass was applied, and a number 5 Voorhees' bag inserted in the cervix, with a half-pound weight attached. Except for very slight oozing this controlled the bleeding. The patient's general condition remained fair, and preparations for a transfusion were made. She had been nauseated for several hours, and had not retained fluid, so 1000 cc. of five per cent glucose and saline was given by hypodermoclysis. Morphine sulphate, grain 1/4, was given at the onset of treatment. The bag was inserted at 8:00 A.M., and was expelled three and a half hours later. Under ether anesthesia a premature macerated fetus was delivered by version and breech extraction. The placenta showed an area of separation involving about one-third of the maternal surface, with old blood and clots in one area, indicating a probable first slight separation at the time of the chill three days before. The uterus reacted well and the patient was returned to bed in fair condition. She made an excellent recovery and was discharged to her home on the twelfth day.

SUMMARY AND CONCLUSIONS

Compression of the uteroplacental sinuses by means of a Spanish windlass supplemented by cervicovaginal tamponade usually controls the hemorrhage in abruptio placentae.

This affords time for transfusion and other measures to improve the general condition and seems to shorten and expedite labor.

Cesarean section should be reserved for cases seen at or near term, with an undilated cervix and a baby in good condition, and when true uterine apoplexy with hemorrhagic infiltration is believed to be present.

Seven cases of abruptio placentae are described, demonstrating the value of the conservative treatment.

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CASE REPORT

Inversion of the Uterus in Two Consecutive Pregnancies

BY ROGER E. STEWART, M.D.*

THIS patient was first seen by me on March 7, 1935, with the following history:

She was thirty-seven years of age, and had been married four years. With her first pregnancy, she had severe preëclampsia. The systolic pressure went to 230 mm., the urine boiled solid, and there was retinitis and vomiting. A live baby, weighing 5 lbs. 4 oz. was secured by classical cesarean section. It was well developed. An undeveloped fetus about three months in size was removed with the placenta. The postpartum course was uneventful. This delivery was on April 3, 1932. On October 8, 1933 she was delivered at term, with a breech presentation, of a child that did not live. She was said to have been toxic with this pregnancy, though her impression is that she was well throughout. While the obstetrician was waiting for the placenta, without any credé maneuver, it was extruded, and quickly followed by a completely inverted uterus. The placenta was strongly adherent, and removed with difficulty. The uterus was restored at once, manually. The patient's physician reported no shock or hemorrhage, but the postpartum course was marked by a week of subinvolution, secondary anemia, and considerable mental depression.

The patient was seen by me early in her third pregnancy. In view of her age (thirty-seven) and previous history, a cesarean section was thought to be her best chance for getting a live baby, and also for her own survival. Her pregnancy was normal throughout. A low transverse cervical section was

*Stewart, Roger E.—Assistant in Gynecology, Harvard University Medical School. For record and address of author see "This Week's Issue," page 381.

performed at term, on August 17, 1935 at the Massachusetts Women's Hospital, and a vigorous seven and a half pound infant delivered. After waiting awhile, with no signs of separation of the placenta, slight credé expression was resorted to. Shortly after this the placenta appeared in the incision. It quickly became extruded, and the uterus followed by completely inverting itself. The placenta was very adherent, and no point of separation could be found between its margin and the endometrium. Hysterectomy seemed the only way out, and had already been decided upon, when a slight area of separation appeared at one edge of the placenta. With considerable difficulty, the latter was removed, complete. There was no hemorrhage and no shock. The pulse ran at the rate of 112 during the induction of anesthesia, and remained at this level for forty minutes. It then gradually declined to 80 at the end of one hour and ten minutes. Her convalescence was uneventful, and she went home on the thirteenth day, postoperative.

COMMENT

While it is possible that the force used was sufficient to initiate inversion, it seems impossible as the pressure was so slight. The case is remarkable as an example of inversion, twice, with adherent placenta, but with apparently no shock or hemorrhage. It suggests some predisposition on the part of the individuals, in view of the many patients subjected to the credé maneuver with all degrees of strength, experience, and judgment, in whom inversion does not result.

REFERENCE

Fox, P. C.: Inversion of uterus in 2 successive pregnancies. Am. J. Obst. & Gynec. **30**: 295 (August) 1935.

WIDESPREAD DECEPTION FOUND IN ALCOHOL RUBS

Rubbing alcohol is frequently adulterated and misbranded, Federal drug officials find. In recent years rubbing alcohol compounds have been used widely for massage and bathing purposes. In December and January, activity in inspecting and testing supplies on the market have led to seizures involving 13,000 bottles, shipped under various names by dealers in the Eastern States. In all the seized rubbing compounds, the examining officials found isopropyl alcohol instead of Ethyl (grain) alcohol. One lot—in a class by itself — contained only two per cent of isopropyl alcohol, although the label on the shipping case claimed "70 per cent alcohol".

Isopropyl alcohol, relatively a newcomer among the commercial alcohols, is a by-product of the petroleum refining industry. It is known that this alcohol, when taken into the human system, is destroyed and eliminated very slowly; that is, its harmful effects are relatively persistent. For this reason, its use in foods such as flavoring extracts has been vigorously opposed by the Food and Drug Administration, and its use in drugs for internal use is subject to like attack.

W. G. Campbell, Chief of the Administration, stated recently, however, that the recent actions do not depend on proof of harmful effects from isopropyl alcohol. "It is not known whether harm does result from its external use," he said, "but Federal courts have repeatedly stated that one of the purposes of the Food and Drugs Act is to enable purchasers to buy foods and drugs for what they really are."

It was pointed out that it is misleading to label an isopropyl alcohol mixture in such a way that the package is an imitation of the well-recognized rub made up almost entirely of ethyl alcohol. This mislabeling is therefore in violation of the Food and Drugs Act. The purchaser does not receive the article he is led to expect. In some of the recent cases, the word "isopropyl" or the chemical symbols C_3H_8OH appeared in small letters on the labels, but the Administration does not consider either of these additions sufficient to inform the purchaser of the true nature of the article, especially in view of the prominent designation "alcohol" or equivalent expressions on the label. The Administration has taken the position that the labels of isopropyl alcohol preparations intended for external bodily use should show the exact nature of the article, without any accompanying words or trade names which tend to confuse the article with ethyl alcohol.

VIOLATIONS OF THE CAUSTIC POISON ACT

In the latest published list of judgments under the Act, three of the eight cases reported dealt with toys. One was a balloon outfit which included a dangerous acid to be used in generating gas for the balloon. Two cases resulted in taking off the market miniature educational chemistry outfits that included dangerous chemicals.

This Act requires that certain caustic or corrosive substances and preparations containing them in a specified concentration shall be labeled to bear the word "Poison", suitable directions as to antidotes, the common name of the poison, and the name and address of the manufacturer, packer, seller, or distributor. The substances are hydrochloric, sulphuric, nitric, oxalic, carbolic, acetic, and hypochlorous acids, salts of oxalic acid, potassium hydroxide, sodium hydroxide, silver nitrate, and ammonia water.—*Bulletin, U. S. Department of Agriculture.*

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE MORTEM AND POST MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

FOUNDED BY RICHARD C. CABOT, M.D.

TRACY B. MALLORY, M.D., *Editor*

CASE 22081

PRESENTATION OF CASE

First Admission. A fifty-six year old white American nurse was admitted complaining of soreness in the right upper abdomen.

Three weeks before entry she developed a vague dragging soreness in the right upper abdomen and flank. This was persistent but did not increase in severity. During the same time she noted shortness of breath with moderate exertion and some swelling of her ankles. She had frequent cramps in her calves at night. Other than a marked degree of flatulence there were no gastrointestinal symptoms. Her bowel movements were kept active by taking two laxative tablets three times daily. Three days before entry she was seized with severe non-radiating colicky pain in the right upper quadrant. There were no acholic stools, nausea, emesis, or jaundice. The pain continued for two days and then abruptly subsided. Thereafter she felt quite weak.

Twelve years prior to admission she had been ill with severe right upper abdominal pain associated with jaundice, nausea, emesis, and chills. At this time she was said to have passed two gall stones.

Her mother and one brother died of tuberculosis. Her father died of carcinoma of the rectum. One sister had diabetes.

Physical examination showed a short, obese female weighing about 200 pounds. The tonsils were enlarged but not reddened. The heart and lungs were negative. The blood pressure was 150/75. The abdomen was full and rounded. Tenderness without spasm was elicited with moderate pressure in the right upper quadrant and high in the epigastrium. The liver was definitely enlarged and tender. There was no ascites. A few varicose veins were observed upon the legs and there was considerable edema of the ankles and feet.

The temperature, pulse, and respirations were normal.

Examination of the urine showed a specific gravity of 1.015 with a slight trace of albumin but was otherwise negative. The blood showed a red cell count of 5,160,000, with a hemoglobin of 80 per cent. The white cell count was 15,500, 85 per cent polymorphonuclears. The nonprotein nitrogen of the blood was 39 milligrams per cent. A fasting blood sugar was 101 milligrams per cent. A Graham test showed no concentration of the dye.

The patient was discharged on the third day.

Second Admission, four days later.

Two days after discharge from the hospital the patient was seized with severe, sharp right upper abdominal pain which radiated to the top of the right shoulder. There was associated nausea and emesis on the day of reëntry. The pain persisted and increased in severity.

Physical examination showed no change since leaving the hospital except marked tenderness and spasm in both upper quadrants and in the epigastrium.

The temperature was 98.6°, the pulse 100. The respirations were 20.

Examination of the urine showed a specific gravity of 1.026 with a slight trace of albumin. The sediment contained 6 white blood cells and 50 red blood cells per field. The blood showed a white cell count of 13,000. The stools were brown and examination was negative.

On the second day a cholecystostomy was done. Except for a slight postoperative rise of 101° and an occasional rise to 100° during the second hospital week the patient's temperature remained normal. The postoperative course was good for about two weeks, at which time the patient gradually became jaundiced. An icterus index was 50 and a van den Bergh was 9.6 milligrams per cent. The icterus index gradually rose to 70. The nonprotein nitrogen of the blood was 58 milligrams and the serum chlorides were equivalent to 85 cubic centimeters N/10 sodium chloride. The urine showed a large amount of bile and the sediment contained a few red and white blood cells. The red cell count of the blood was 4,700,000, with a hemoglobin of 85 per cent. The white cell count was 23,700, 95 per cent polymorphonuclears. The stools were tan colored and gave a strong reaction to the guaiac test. Physical examination showed the patient to be dyspneic. There was edema of the extremities. The tongue was dry. The heart sounds were regular, rate 90, and the quality was only fair. The blood pressure was 110/80. The abdomen was soft, full, and shifting dullness was elicited in the flanks. There was no tenderness in the liver area. Her condition became progressively worse, she developed gallop rhythm, and finally expired on the twenty-seventh hospital day, about a week after the onset of her jaundice.

DIFFERENTIAL DIAGNOSIS

DR. HORATIO ROGERS: From the fact that this patient was a nurse we may take her history as above average in accuracy.

From the first episode we can say that she had a mild attack of something, presumably gallbladder disease, but if you look closely you will see that it is a little more than that. It was accompanied by dyspnea and swelling of the ankles, and followed by an unusual degree of weakness. This may or may not be an integral part of her present disease.

The sudden onset and abrupt termination of her attack are very suggestive of a mechanical cause.

From the past history we know that she has had gall stones, and I assume that she still has a pathological gallbladder, presumably the cause of this present attack.

Physical examination adds a few points. The blood pressure is not elevated. The liver is large and tender. The normal temperature rules out an acute inflammatory disease but the mild leukocytosis suggests the presence of some lesser degree of sepsis. The cholecystogram either was unsuccessful or indicates gallbladder pathology, I think the latter because it fits in with what we already know.

DR. GEORGE W. HOLMES: These films of course fail to show the outline of the gallbladder. You can see the edge of the liver quite well, and the edge of the kidney. I should think if the gallbladder had any dye at all it would have shown. It probably would be in this area and there is nothing there to suggest gall stones.

DR. ROGERS: If they thought they were dealing with a mild subsiding attack of cholecystitis or cholelithiasis in a poor risk patient they might perfectly well have discharged her on the third day.

The second attack is obviously more severe than the first, with marked systemic reaction and pain radiating to the right shoulder, as in irritation of the right diaphragm, rather than radiation to the back as we should expect from gallbladder disease. There is still no fever.

Blood in the urine is confusing, since she has no jaundice, and the only other hint about kidney is that her original soreness was in the flank as well as the upper abdomen. It may be due to trauma from a catheter or it may be an important lead. The white count is lower than before, another point in favor of mechanical rather than inflammatory damage.

It is legitimate to speculate as to why a cholecystostomy was done. Not for jaundice, not for empyema of the gallbladder. The patient was a poor surgical risk but her symptoms were getting worse. The diagnosis was not entirely clear. An exploration was justifiable. The surgeon may have found that more surgery was desirable but unsafe, or that some inoperable condition existed.

Following operation she became progressively jaundiced in spite of a tube sewed into the gallbladder. That seems very queer. The chlorides are diminished, probably by loss of bile from the tube and through vomiting. The tan color of the stools must indicate the presence of bile as well as blood. I cannot explain the blood unless her jaundice, brief as it seems to have been, accounts for it. At all events it is evident that the patient did not have a complete obstruction of the common duct.

A PHYSICIAN: I think we ought to know whether she drained any bile.

DR. ROGERS: I am taking "she did well for two weeks" as meaning that she did.

Jaundice with bile in the stools, unless it is hemolytic jaundice (and there is no shred of evidence for that) must be of intrahepatic origin, and due to marked liver damage.

We are now dealing with a very sick patient with deep jaundice, dyspnea, edema and fluid in the abdomen. Is the fluid bile or ascitic fluid? There is no story of a sudden accident following operation to suggest the escape of bile into the abdomen. I shall assume ascites. Note that although the abdomen is now soft, nothing further is said of the enlarged liver. What has become of it? The spleen was never felt.

It seems to me that we have ample evidence of gallbladder and liver disease. Let us consider the common causes of death from gallbladder disease.

1. Mechanical accidents, such as rupture, or perforation of a stone into the intestine.
2. Infection.
3. Obstruction of the bile ducts by stone.

We have some evidence for 2 and 3 but none for 1 except the suddenness of events at first. Her last white count is consistent with some bile duct infection. We cannot rule out stones, but we feel sure the common duct is open. We know there is liver damage sufficient to cause deep jaundice and probably death, but what, besides low-grade infection, is causing the liver damage?

She is fifty-six. It is reasonable to suppose that she might have had some neoplasm with metastasis in the liver or even primary cancer of the liver or bile ducts, but there is little evidence for such a diagnosis. The acuteness of the symptoms, lack of gradual onset, and disappearance of the enlarged liver are all against cancer.

Viewing her disease as a whole, it seems to me the things that distinguish it from plain cholecystitis are the circulatory manifestations—edema, dyspnea, ascites. We know that a patient with portal cirrhosis may remain symptom-free as long as the compensatory circulation does not break down. But even a mild attack of cholecystitis might be enough to break it down by a superimposed biliary infection. Such a diagnosis would account for this patient's picture better than anything I can think of. It would explain the absence of a long history, the afebrile course, the jaundice, the circulatory

symptoms, and the fatal termination. It might account for the large tender liver at one examination and the presumed absence of a palpable liver thereafter. There should have been a palpable spleen, but perhaps this was missed because of the patient's obesity.

Clinical Diagnoses

Hypertension.
Obesity.
Cholecystitis.
Hepatitis.

Dr. Horatio Rogers' Diagnoses

Chronic cholecystitis.
Mild acute cholangitis and hepatitis.
Portal cirrhosis (fatty) of the liver.

Anatomic Diagnoses

Carcinoma of the gallbladder with metastases to the peritoneum, liver, pancreas, mesenteric and retroperitoneal glands.
Acute intrahepatic cholangitis.
Operative wound. Drainage of abscess of the gallbladder bed.
Ascites.
Icterus.
Bronchopneumonia.
Fat necrosis of pancreas.
Diverticulum of the duodenum.
Cyst of the kidney.

Pathologic Discussion

Dr. Tracy B. Mallory: Dr. Rogers' line of thought ran very close to that of the physicians who were in charge of the case. The surgeon, I assume, went right down to the gallbladder through adhesions and was unable to make an exploration. Certainly there is no note of the condition of the remainder of the peritoneal cavity or of the surface of the liver itself. As the patient progressively grew worse and became deeply jaundiced they began to think of cirrhosis and Dr. Bock was called in consultation. He differed from Dr. Rogers on one point. He thought if the patient had portal cirrhosis at this stage of the game she would have a small atrophic liver rather than a large one and consequently he was against the diagnosis of portal cirrhosis.

We found at autopsy a severe grade of liver damage in the form of diffuse cholangitis. The gallbladder was practically lost in a huge tumor mass, and on dissection it became apparent that the drain had never been in it but had been inserted into an abscess of the gallbladder bed. The tumor must have been growing very rapidly to have increased so much in size between the time of the operation and death, which was less than a month later. The mucosa of the gallbladder was completely replaced with shaggy tumor masses. The tumor had invaded deeply into the liver. There were metastases on the peritoneal surface, with terminal hemorrhagic ascites. We found nothing in the gastrointestinal tract to explain the positive guaiacs in the stools. So that I think there is no question that she died of a primary cancer of the gallbladder with a secondary hepatitis. The bile ducts were perfectly free. There was tumor in the head of the pancreas, also. We have had several cases in which we found it very difficult to decide whether cancer was primary in the gallbladder or in the pancreas. I think in all probability it is usually primary in the gallbladder in such a case. We have twenty-seven primary cancers of the gallbladder on record, and among those we found five in which the head of the pancreas also showed cancer. The other cases all showed metastases to the lymph nodes in the region of the head of the pancreas but no tumor was found in the pancreas itself. Most of the anatomical work tends to show that the lymphatics of the gallbladder run down over the surface of the pancreas but do not penetrate its substance.

Have you any comment, Dr. Allen?

Dr. Arthur W. Allen: I would like to know whether any gall stones were found at autopsy or operation.

Dr. Mallory: No. I assume, however, as Dr. Rogers did, that she had suffered from gall stones in the past. Almost invariably cancer of the gallbladder is associated with stones or at least a history of stones.

Dr. Rogers: May I ask why she had bleeding from the gastrointestinal tract and in the urine?

Dr. Mallory: I do not know about the urine. As far as the gastrointestinal tract is concerned the jaundice is adequate. I think two-thirds of our jaundice cases show a positive guaiac.

A Physician: What did the kidneys show?

Dr. Mallory: Nothing of note beyond arteriolar sclerosis. The kidneys in some cases of cholemia do show marked change of the tubules but not often red cells. The glomeruli ordinarily are perfectly normal.

Dr. Chester M. Jones: I should like to ask how common it is to get sharp pain radiating to the top of the shoulder in this sort of picture. That is very interesting and might fit in with an intrahepatic condition rather than gallbladder itself.

Dr. Rogers: Yes, if it were from the gallbladder I think you would expect it in the back rather than the shoulder.

Dr. Allen: This second attack suggested perforation of the gallbladder with irritation under the diaphragm. I suspected that that was what they were going to find at operation.

CASE 22082

Presentation of Case

A forty-one year old Russian woman was admitted complaining of blood in her stools.

About a year before entry the patient noticed a considerable amount of clotted blood in her stools on several occasions associated with slight pain. This continued off and on for about six months until she consulted a physician who removed or cauterized something in the rectum. She did not know what was found but thought that it was not a hemorrhoid and was higher up in the rectum. There was no change in her condition thereafter. She had been constipated for about five years and had required one or two laxative tablets daily until three weeks before entry when presumably her bowel movements occurred spontaneously about once daily. She felt as though she had incomplete evacuation and there was a lower abdominal cramping sensation occasionally associated with the frequent passage of flatus. The character of the stools was not noted. There was a loss of about five pounds in one year. Her catamenia was regular but the onset of the menses was usually marked by pain in the left lower quadrant. There was some leukorrhea in the interval between periods.

A plastic operation upon the left tube with suspension of the uterus had been done eleven years previous to entry.

Physical examination showed a middle-aged woman who appeared to be in no distress. Oral hygiene was poor and there were many carious teeth. The heart was normal. The blood pressure was 115/75. The lungs were clear. A well healed lower midline abdominal scar was observed. The inguinal nodes appeared to be slightly enlarged. There was slight tenderness with deep pressure in the left lower quadrant. Vaginal examination showed a large, firm, nodular, lacerated cervix. A small, pale, cystic nodule was present on one lip. The fundus was slightly enlarged and fixed to the anterior abdominal wall. The left vault felt full and was slightly indurated and tender.

The temperature, pulse, and respirations were normal.

Examination of the urine was negative. The blood had a hemoglobin of 70 per cent.

A barium enema showed a shadow in the sigmoid near its junction with the descending colon. The shadow was about 3 centimeters in diameter and appeared to be polypoid in configuration.

A proctoscopy showed a bleeding growth high in the rectosigmoid. At the end of six days an exploratory laparotomy was done.

Differential Diagnosis

Dr. Reginald H. Smithwick: The history is that of a forty-one year old female apparently in good general health. What little evidence is available concerning the blood picture suggests a slight degree of anemia.

The history of clotted blood in her stools on several occasions during the past year suggests a profuse type of intermittent bleeding which might be seen, and which would be more apt to be seen in some highly vascular friable lesion which might ulcerate at times containing an excellent blood supply, and suggests that the bleeding is from above the internal sphincter inasmuch as the blood must have been in the rectum for some time in order to produce clots. This type of bleeding is not characteristic of carcinoma. The patient's age is against a carcinoma of the sigmoid. Profuse bleeding in carcinoma of the sigmoid is rare at any age, and the history of removal of some type of growth in the rectum or sigmoid six months ago plus the x-ray findings of a definite polypoid lesion in the sigmoid, plus the proctoscopic examination in which a lesion was actually seen, places the tumor in the sigmoid colon.

There is a discrepancy between the barium enema and the proctoscopic finding. The proctoscope would place the growth low in the sigmoid, whereas the barium enema would place the growth high in the sigmoid. This story suggests that the growth is polypoid and has a pedicle of some length so that the tumor can at times be visible from below and can at times be forced high enough to appear at the junction of the sigmoid and descending colon by x-ray.

The history also suggests a partial degree of intestinal obstruction, as evidenced by lower abdominal cramps, the passage of flatus, and the sense of incomplete evacuation after movement. This suggests a fairly large polypoid tumor producing partial obstruction of the intestine. There are many benign lesions of the large intestine, many of which are not commonly seen, such as lipomata, fibromata, fibromyomata, etc. Sarcoma is very rare. Invasion of the rectum or sigmoid by tumors of the pelvic organs is possible but would not be apt to give this particular group of signs and symptoms. The most likely possibility would seem to be a polyp of the sigmoid composed to a large degree of epithelial elements with a rich blood supply on a long pedicle and presumably benign at this time, although malignant degeneration at the base is always a possibility.

Preoperative Diagnoses

First operation: Carcinoma of the rectum.
Second operation: Polyp of the sigmoid.

Dr. Reginald H. Smithwick's Diagnosis

Benign polyp of the sigmoid.

Pathologic Diagnosis

Adenomatous polyp of the sigmoid.

THE AMERICAN FOUNDATION OF TROPICAL MEDICINE

THE American Academy of Tropical Medicine, meeting in St. Louis in November, founded The American Foundation of Tropical Medicine, for the prevention, control and scientific investigation of the tropical diseases which occur in the continental United States and the neighboring countries around the Caribbean Sea. The purposes of the foundation will be made effective by a fund which private individuals and commercial concerns with interests in the tropics have agreed to raise.

Dr. Earl B. McKinley, dean of the Medical School of George Washington University, will represent the academy on the board of directors, other directors being Dr. Isaiah Bowman, president of Johns Hopkins University; Perry Burgess, president of the American Leprosy Foundation; Dr. Nicholas Murray Butler, president of Columbia University; E. B. De Golia, of San Francisco; Harvey S. Firestone; Thomas W. Lamont; Dr. Leo S. Rowe, director-general of the Pan-American Union; Dr. Robert G. Sproul, president of the University of California; Malcolm B. Stone of Boston, president of the Ludlow Manufacturing Associates, and Alvin P. Howard and Paul H. Saunders of New Orleans.

At the same meeting Dr. Richard P. Strong, head of the School of Tropical Medicine of Harvard University, was elected president of the Academy.

The days of private and presumably disinterested philanthropy are drawing farther from us; fewer are the great fortunes which depression and taxation have left in a condition to indulge in outstanding benevolences. More and more we must rely upon commercial interests to endow scientific investigation and humanitarian endeavors, and on the whole these endowments have been made with a generosity of spirit which leaves science free to seek its ends with an unencumbered honesty of purpose.

The Massachusetts Medical Society

THE ANNUAL MEETING OF THE SECTION OF PEDIATRICS

THE Section of Pediatrics will present, at the annual meeting in June, a panel discussion on "Rheumatism and Rheumatic Heart Disease in Early Life." The leader of the panel will be Dr. John Lovett Morse of Boston. Dr. Morse is Emeritus Professor of Pediatrics of Harvard Medical School and was for many years Physician-in-Chief of the Infants' and Children's Hospitals of Boston. Assisting Dr. Morse on the panel will be Doctors Paul White, Tracy Mallory, Hyman Green, T. Duckett Jones and Eli Friedman of Boston and Oliver Stansfield of Worcester.

The meeting of the Section will start promptly at 9 A.M. on Wednesday, June 10, 1936, in the lower room of the Springfield Municipal Auditorium. Adequate loud speakers will be installed so that the discussion may be heard clearly in all parts of the room.

The etiology, pathology, symptomatology, prognosis and treatment of "Rheumatism and Rheumatic Heart Disease in Early Life" will be discussed by the panel. Questions in writing may be submitted in advance to Dr. Morse or to your officers, and from the floor at the meeting.

Plan now to attend the annual meeting of The Massachusetts Medical Society at Springfield, and especially the Section of Pediatrics. We know you will enjoy the entertainment in store for you. Bring the ladies and make it a three day vacation of fellowship, instruction and fun.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

CATTELL, RICHARD B. A.B., M.D. Harvard University Medical School 1925. F.A.C.S. Surgeon, Lahey Clinic, New England Deaconess and New England Baptist Hospitals. Address: 605 Commonwealth Avenue, Boston, Mass. Associated with him is

SWINTON, NEIL W. M.D. University of Michigan Medical School 1929. Surgeon, Lahey Clinic. Address: 605 Commonwealth Avenue, Boston, Mass. Their subject is Endometriosis. Page 341.

HUNTER, FRANCIS T. A.B., A.M., M.D. Harvard University Medical School 1924. Assistant Physician, Massachusetts General Hospital. Associate Physician, Collis P. Huntington Memorial Hospital. His subject is Hutchinson-Boeck's Disease (Generalized "Sarcoidosis"). Page 346. Address: 6 Commonwealth Avenue, Boston, Mass.

COTTON, FREDERIC J. A.B., A.M., M.D. Harvard University Medical School 1894. F.A.C.S. Formerly, Surgical Chief, and Chief VI Bone and Joint Service, Boston City Hospital. Consultant, Boston City Hospital, Beth Israel Hospital and Faulkner Hospital. His subject is Foot Statics and Surgery. Page 353. Address: 520 Commonwealth Avenue, Boston, Mass.

LEVI, ALEXANDER A. M.D. Tufts College Medical School 1926. Instructor in Department of Obstetrics, and Teaching Assistant in Department of Gynecology at Tufts College Medical

School. Surgeon, Out-Patient Department, Cambridge Hospital. Obstetrician, Evangeline Booth Maternity Hospital. Junior Surgeon, Gynecology Department, New England Medical Center. Address: 485 Commonwealth Avenue, Boston, Mass. Associated with him is

KRINSKY, CHARLES M. M.D. Tufts College Medical School 1933. Formerly, Clinical Assistant in Medicine, Worcester State Hospital. Teaching Fellow in Obstetrics, Evangeline Booth Hospital, Boston. Now, Interne, Newark Beth Israel Hospital. Address: 201 Lyons Avenue, Newark, N. J. Their subject is The Effect of Coramine on Postpartum Patients Under the Analgesic Influence of Some Barbiturie Acid Drugs. Page 362.

PRATT, JOSEPH H. Ph.B., A.M., M.D. Johns Hopkins University School of Medicine 1898. Physician-in-Chief, Boston Dispensary. Professor of Clinical Medicine, Tufts College Medical School. His subject is The Personality of the Physician. Page 364. Address: 270 Commonwealth Avenue, Boston, Mass.

HEFFERNAN, ROY J. M.D. Tufts College Medical School 1917. F.A.C.S. Visiting Gynecologist and Obstetrician, Carney Hospital. Visiting Obstetrician, St. Mary's Hospital. Instructor in Gynecology, Tufts College Medical School. His subject is Abdominal Compression and Vaginal Tamponade in the Treatment of Abruptio Placentae. Page 370. Address: 524 Commonwealth Avenue, Boston, Mass.

STEWART, ROGER E. B.S., M.D. Columbia University Medical School 1928. Assistant in Gynecology, Harvard University Medical School. Assistant in Obstetrics, Tufts College Medical School. Junior Visiting Surgeon, Obstetrics and Gynecology, Boston City Hospital. Assistant Obstetrician, Newton Hospital. His subject is Case Report. Inversion of the Uterus in Two Consecutive Pregnancies. Page 373. Address: 201 Bay State Road, Boston, Mass.

The Massachusetts Medical Society

SECTION OF OBSTETRICS AND GYNECOLOGY*

C. J. KICKHAM, M.D., *Chairman*
524 Commonwealth Ave., Boston, Mass.

R. S. TITUS, M.D., *Secretary*
472 Commonwealth Ave., Boston, Mass.

HYDATID MOLE

Hydatid mole consists of the formation of cysts from a millimeter to 2.5 cm. in diameter in the placenta. When it occurs early in pregnancy the whole placenta may be involved with disappearance of the fetus and continued growth of the mole. It may occur at any time during pregnancy with only parts of the placenta involved and a normal fetus. In such cases the disease is probably often not recognized. The cysts are filled with a thin clear fluid. The important change so far as the clinician is concerned is a proliferation of the epithelial layers of the placenta, Langhans' cells and the syncytium, because it may become malignant, forming chorio-epithelioma.

The cause of hydatid mole is not known. It is estimated to occur about once in 2000 pregnancies and at any age in the reproductive life.

Suspicion of the disease should be aroused by a greater increase in the size of the uterus than the normal for the period of gestation at which the patient is examined. That and bleeding coming on usually at from the second to the sixth month of pregnancy are the outstanding symptoms. Some of the cysts may be passed so that an attempt to find them should be made under such conditions. The disease commonly results in expulsion of the mole during the third or fourth month of gestation. Any spontaneous miscarriage might be due to a mole and the products should always be examined at least grossly and preferably microscopically as well.

The treatment consists of being sure that the uterus is emptied and that can be done only by examination under anesthesia with exploration of the uterine cavity with the finger, ovum forceps, and curette. More than ordinary gentleness is necessary because the villi may have invaded the uterine wall making soft areas, easily perforated.

The treatment must not end there because it is estimated that in five per cent of these cases chorio-epithelioma may develop from the mole and it has to be diagnosed early if the patient is to be saved. This disease may appear soon or years after the mole. The patient should be kept under observation for two years. During the first year an Aschheim-Zondek test should be done at frequent intervals. It becomes negative normally in from two to four weeks after the uterus is empty. If a positive test persists, chorio-epithelioma must be suspected and the uterus curetted for diagnosis and the vaginal wall examined for metastases. A microscopic examination of the tissue removed is essential. If irregular bleeding (especially that characterized by gushes of blood) occurs, the uterus should be curetted for diagnosis.

*A series of short selected articles by members of the Section is being published weekly.
Comments and questions by subscribers are solicited and will be discussed by members of the Section.

A PRIZE FOR AN APPROVED ESSAY

The attention of interns in Massachusetts hospitals is called to the fact that a prize of $50.00 has been offered by the Massachusetts Medical Society for the best written and most comprehensive case report submitted by one of their number holding a rotating internship in any Massachusetts hospital which is approved by the American Medical Association for intern training during 1935-1936.

This report is to be typewritten, and when completed is to be sealed, unsigned, in a plain envelope, which in turn is to be placed together with a separate slip bearing the name and address of the contestant, in a larger envelope, and sent to:

The Massachusetts Medical Society,
Committee on Medical Education and Medical Diplomas,
8 Fenway, Boston, Mass.

The contest this year closes May 1, 1936. Reports may be submitted at any time prior to that date.

CORRESPONDENCE

ARTICLES ACCEPTED BY THE AMERICAN MEDICAL ASSOCIATION COUNCIL ON PHARMACY AND CHEMISTRY

535 North Dearborn Street, Chicago, Ill.,
January 31, 1936.

Editor, *New England Journal of Medicine,*

In addition to the articles enumerated in our letter of December 30, 1935, the following have been accepted:

Robert A. Bernhard
Saf-T-Top Tincture of Merthiolate 1:1000

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Dextrose, U.S.P. (d-Glucose), 25 Gm., 50 cc. Ampoule (Unbuffered)
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United States Standard Products Company
Rabies Vaccine (Killed Virus) Semple (U.S.-S.P. Co.) (25 per cent suspension) seven and fourteen vials packages

PAUL NICHOLAS LEECH, *Secretary,*
Council on Pharmacy and Chemistry.

THE PHYSICIAN IN NATIONAL DEFENSE

Editor, *New England Journal of Medicine,*

Believe it or not, the Constitution as interpreted by the courts, makes every male citizen between the ages of eighteen and forty-five a member of the unorganized militia. If this were not so, the guarantee of "life, liberty, and the pursuit of happiness" would be a farce. In a great national emergency all of us must help, and it behooves each of us to find his proper place in the complicated machinery of national defense *before* the emergency arises,—even before it appears upon the horizon. The more we desire peace, the more important this is. "The most effective way to preserve peace is to prepare against war." In joining the Army and Navy we identify ourselves with the most potent peace agencies in the country; with men who picture the terrible effects of war from *memory*, not from imagination.

The various elements of national defense open to physicians should be considered in logical order:

First, the Regular Army or Navy as a life career. The requirements of the Regular Army are American citizenship, age between twenty-three and thirty-two, compliance with physical standards, satisfactory evidence of good character, degree of M.D. from a Class "A" Medical School, and a diploma from the National Board of Medical Examiners or passage of a satisfactory mental examination. The successive grades and pay under present laws in the Regular Army are as follows:

Grade	Time in Grade	Pay Proper (Monthly)
1st Lieutenant	3 years	$166.67
Captain	9 years	210.00-220.00
Major	8 years	300.00-325.00
Lt. Colonel	6 years	379.17-408.33
Colonel	Until age 64	466.67-500.00

Brigadier General and Major Generals are selected from grade of Colonel and receive more pay and allowances.

In addition to the above pay, from $18 to $54 per month, depending upon the number of dependents, is paid in lieu of subsistence. Quarters are furnished in kind or are commuted into money allowances, in amounts varying from $40 to $120 a month, depending upon rank. No officer below the grade of Brigadier General receives total pay and allowances exceeding $600 per month.

The Regular Army is an interesting life career, free from the irritating commercial details of civilian practice. It is hard to enter and will never make you rich, but if it appeals to you, write to the Corps Area Surgeon, Army Base, Boston, Mass.

Secondly: We should consider seeking a commission in the National Guard of our State. Information about it can be secured from the nearest State Armory or from the Adjutant General of the State.

Finally: If we do not feel that we can ally ourselves with either of these sections of the first line of defense, we should certainly endeavor to join the second line, namely, the Army or Navy Reserve. Qualifications (Army): American citizenship, age between twenty-one and thirty-five years, satisfactory physical examination, diploma from a Class "A" Medical School, a license to practice medicine in a state, territory or the District of Columbia or a diploma from the National Board of Medical Examiners, and actual engagement in the ethical practice of medicine. Reserve Officers receive no pay except when ordered to active duty. They are never ordered to active duty in time of peace without their consent. When on active duty they receive the same pay as regular officers of the same grade. Their promotion is more rapid than that of the regular army.

The reason for the existence of the Reserve, which, by the way, was originated by the Medical Corps, is the need of a large body of officers assigned and partially trained in advance of a possible emergency. It will contribute enormously to the efficiency of mobilization and will materially lessen confusion and wire-pulling for desirable rank and assignment. One of the advantages to the individual officer is that he will receive promotion during peace time and will not have to enter the service in war time in the lowest grade. In return for these advantages, however, a reserve officer is expected to devote a small amount of time to his own military education. You are assured, however, that the training is too interesting to be burdensome, and cannot but be valuable to you in your civilian careers.

Newly appointed Reserve Lieutenants will be very likely to have an opportunity to be ordered to active duty with the Civilian Conservation Corps at a total salary approximating $225 a month, if they so desire. Since the expenses are very low, this is an excellent opportunity to save up a little money to start practice.

The Reserve is rapidly undergoing a transformation. New life is being breathed into it. It is expected that in the near future the medical regiments, the medical detachments and the hospitals of all sizes will have their commissioned personnel slates filled and that participation in their activities will be both pleasant and interesting instead of being merely a duty. For information write to the Corps Area Surgeon, Army Base, Boston, Mass.

The three components of national defense are now before you. You can do one of the following things:

Throw this article into the pile of things you have finished with.

Put it aside for further consideration and probably forget it.

Act.

G. M. Ekwurzel, Colonel, M.C.,
Corps Area Surgeon,
Army Base, Boston, Mass.

RECENT DEATHS

BERRY—John Cutting Berry, M.D., of 28 Trowbridge Street, Worcester, Massachusetts, died February 8, following a brief illness. Dr. Berry was born at Small Point, Maine, in 1847, the son of Stephen Decatur Berry, a ship captain.

His early education was acquired at Monmouth Academy and Bowdoin College. He received his M.D. degree from Jefferson Medical College in 1871 and immediately afterward served as a medical missionary under a commission from the American Board of Foreign Missions. Especial interest in medicine led to an appointment in a government hospital at Kobe, Japan, and outlying clinics. One evidence of personal influence is shown in reforms in Japanese prison administration. Dr. Berry later had positions in Okayama and Kyoto and became influential in many ways in that country, having founded the Doshisha Hospital and with it the training school under Miss Linda Richards. Distinction in connection with his work in the earthquake area in 1891 and in various other ways secured recognition which led to the decoration of "The Imperial Order of the Sacred Treasure of the Third Class."

On returning to the United States in 1893 after a period of study in Vienna, he settled in Worcester, where he established a large practice in eye and ear surgery, in addition to serving on the staff of the Worcester City Hospital. Membership in the Massachusetts Medical Society and Fellowship in the American Medical Association were acquired in 1896.

His standing in his chosen field led to membership in the New England Ophthalmological Society and the New England Society of Otology and Laryngology.

Dr. Berry retained his interest in the development of Japan and was active in civic and religious circles in Worcester.

Three children, Dr. Gordon Berry of Worcester, Miss Katherine Fiske Berry, also of Worcester, and Mrs. Helen Berry Holton, of Brockton, survive him, as do two grandchildren.

KNOWLES—William Fletcher Knowles, M.D., a retired member of the Massachusetts Medical Society, died at his home, 1035 Beacon Street, Brookline, Massachusetts, February 12, 1936.

Dr. Knowles was born in Cambridge, Massachusetts, in 1861, the son of William Fletcher Knowles and Sarah (Robinson) Knowles. After graduating from the Harvard Medical School in 1895, he served first at the Carney Hospital and later at the Massachusetts Eye and Ear Infirmary, and was a member of the American College of Surgeons and formerly President of the New England Oto-Laryngological Society.

During the War, Dr. Knowles served at the base hospital at Camp Devens and received the commission of major.

He is survived by his widow, Mrs. Charlotte Treat

Knowles; a son, Robert T. Knowles, of Okmulgee, Oklahoma; a daughter, Mrs. G. Gardner Monks, and a sister, Miss Carrie W. Knowles, of Boston.

NOTICES

SUMMER COURSE IN BACTERIOLOGY

A summer course in General and Sanitary Bacteriology will be offered this year by the Department of Biology and Public Health, Massachusetts Institute of Technology, Cambridge, Mass. The course will last for six weeks, from June 16 to July 28. Classes will meet daily, except Saturdays and Sundays, from 9 to 12.

The course will consist of lectures, recitations, demonstrations, laboratory work and appropriate field trips. The laboratory work will include consideration of the methods employed in studying bacteria, the preparation and sterilization of culture media and other laboratory supplies, the study of pure cultures, the effect of physical and chemical agents of bacteria and the bacteriological examination of water and milk.

The course is designed for beginners in bacteriology and should appeal to public health nurses, health education workers, public health laboratory and hospital technicians, sanitary inspectors, water works operators, milk inspectors, milk analysts and students preparing for careers in biological science, public health, or medicine. Preliminary training in science, though desirable, is not required. The fee for the course is $55.00.

Academic credit will be given to all who pass the course successfully.

Students having adequate training and special interests may arrange to work on special problems most suited to their needs.

All inquiries should be addressed to Prof. M. P. Horwood, Massachusetts Institute of Technology, who will be in charge of the course.

MEDICAL CLINIC AND STAFF ROUNDS AT THE PETER BENT BRIGHAM HOSPITAL

At 3:30 P.M. on Thursday, February 27, in the Amphitheatre of the Peter Bent Brigham Hospital, Dr. James E. Paullin, Clinical Professor of Medicine, Emory University, Atlanta, Georgia; Physician-in-Chief, pro tempore, Peter Bent Brigham Hospital, will give a medical clinic. To it are cordially invited practitioners and medical students.

On Saturdays in the wards of the Peter Bent Brigham Hospital, from 10 to 12, staff rounds will be conducted.

A SECONDHAND DEAN LEWIS' LOOSE LEAF SURGERY WANTED

Dr. Mildred E. Burton, a medical missionary in the Clara Swain Hospital, Bareilly, India, under the Board of the Women's Foreign Missionary Society of the Methodist Episcopal Church, wishes to purchase a secondhand Dean Lewis' Loose Leaf Surgery, which has been kept up to date. Anyone wishing to dispose of the same kindly communicate with Mrs. Wm. S. Mitchell, 100 Washington Street, Malden, Mass.

REPORTS AND NOTICES OF MEETINGS

GREATER BOSTON MEDICAL SOCIETY

The January meeting of the Greater Boston Medical Society was held on January 7, 1936, at the Beth Israel Hospital. The president of the society, Dr. H. Linenthal, presided.

Dr. Elliott P. Joslin opened the meeting with a brief talk on the Community Drive, which is a combination of over one hundred social agencies, and spoke warmly in favor of its appeal for financial aid. He also presented a case of diabetes, who had been treated with a new kind of insulin, the action of which is greatly prolonged because of its combination with the protamine of a certain fish.

Dr. Harry Blotner spoke on the "Effect of Intestinal Enzymes on Insulin; Prevention of Digestion of Insulin with Alcohol." He attempted to discover the reason why insulin is ineffective by mouth. By incubating insulin with gastric juice and injecting it into rabbits, he found that the insulin had become inactive. If, however, he added alcohol before incubating, the insulin was no longer digested by the gastric juices and its activity remained. The same was found to be true using the enzymes, trypsin and also pancreatin. With these experimental data in mind, he gave insulin with alcohol by mouth to a patient but found that the blood sugar was not affected. This may be because the alcohol is absorbed from the stomach leaving the insulin unprotected against the gastric juice, or because the mucous membrane of the intestine is impermeable to insulin.

Dr. Boris Greenberg spoke on "The Visualization of Postgonorrheal Complications." By injecting lipiodol into the urethra and taking x-ray plates, it is possible to study the changes that take place after infection with gonorrhea. Slides were shown to demonstrate the normal urethra, acute anterior and posterior urethritis, prostatitis, prostatic abscess, periurethric abscesses and strictures. Dr. Greenberg put this forward as an additional adjunct in the diagnosis of postgonorrheal complications.

Dr. B. M. Jacobson spoke on "Study in Gout." Three fundamental facts have been generally recognized as actively true in all cases of gout: First, sodium urate crystals are found to be always deposited in the tissues; secondly, there is a marked rise of the uric acid in the acute attack; and thirdly, colchicine is always effective therapeutically. Dr. Jacobson has been working on the problem of why the uric acid is deposited in the tissues. He has studied the changes in the water and mineral metabolism in the typical and acute attacks of gout, and has found that there is always a diuresis of water and sodium chloride resulting in a negative

balance of these substances, and including to a smaller extent, the other minerals. This diuresis may start a few days before the onset of the attack or on the same day as the onset. When the attack is in its full severity, the diuresis stops and compensation takes places rapidly as the patient recovers. This mineral loss is not related to the uric acid secretion or to the fever or drug administered, but it is in proportion to the severity of the attack and is a constant finding.

By the 1930 Folin method of serum uric acid determinations, cases of gout frequently did not have a high uric acid. However, by the new 1934 Folin method, every case has a value above 6 milligrams per hundred cubic centimeters, which is an abnormally high figure. If there is general nitrogen retention, as in nephritis, a high blood uric acid is not significant. Dr. Jacobson also studied the therapeutic effect of purine-free and purine-high diets on the frequency of occurrence of attacks and found practically no difference over a long period of time.

A paper on "A Method for the Prolongation of the Effect of Medication" was presented by Dr. H. L. Naterman. By the use of a purified ester of cholesterol mixed with a small amount of water and added to oil, Dr. Naterman has made a medium in which he can emulsify certain drugs and greatly prolong their period of absorption and therefore their therapeutic effect. First he tried this on phenolsulphonethalein and found that the absorption was greatly delayed as measured by the slow excretion of the dye. The use of pitressin in emulsion in the treatment of diabetes insipidus has been found to be effective over a much longer time than when the drug is used in water. In this condition, one injection a day is usually enough. Adrenalin in oil has been used in the treatment of asthmatics with encouraging results. Pollen extracts in oil have also been used in certain cases of asthma.

Dr. S. Proger delivered a paper on "Some Effects of Diet Restriction on Patients with Heart Disease." He found that patients on a high caloric intake with severe heart disease and some degree of decompensation after they had reached a level on digitalis were definitely benefited by a reduction of their caloric intake. He put them on 350 calories a day for three days, which amount was then raised to 600 calories and later to 800 calories. By this procedure he reduced the oxygen consumption by 25 per cent, lowered the basal metabolism rate, diminished the weight, lowered the minute pulmonary volume, increased the vital capacity and diminished the diastolic and systolic pressure readings. The pulse rate also slowed down definitely. When the caloric intake was increased and the weight rose, the effect of this treatment was partially lost and the magnitude of the effect was greater when the weight loss took place from a normal level rather than from an obese level.

Dr. H. J. Sternstein spoke on "Quantitative Measurement of Nasal Obstruction." By the use of a simple nasal manometer, he has been able to measure the resistance offered to a stream of air going through the nasal passages. This resistance can be charted and compared with the normal. Slides were shown of normal cases and those with partial or complete obstruction. This method can be used to advantage in studying the normalcy of the mucous membrane by taking readings before and after shrinkage. It is also of use in measuring the therapeutic effect of various drugs. Dr. Philip Drinker of the Harvard School of Public Health has been using this apparatus to study the filtering ability of the nose. In the normal nose the nasal passages stop from 10-30 per cent of the small dust particles, and Dr. Drinker therefore concluded that it is not an efficient mechanism in protecting against the diseases caused by dust.

The last paper of the evening was on "The Prevention of Anemia in Pregnancy" by Dr. M. B. Strauss. Anemia is common in pregnancy and may be caused by any of the usual factors, but most cases are of the simple hypochromic variety. The incidence is about 25 per cent, and 1-5 per cent are severe in degree. At birth the baby always has a normal blood hemoglobin and this, therefore, is always a drain on the mother. She should have, during pregnancy, an increased iron intake. By studying 200 pregnant women from the fifth month onwards, at monthly intervals, and giving 100 of them three grains of ferrous sulphate three times per day, and the other half lactose tablets only, he was able to show that this amount of iron was adequate to prevent anemia during pregnancy. Of those who did not take iron, 25 per cent developed anemia. Only 20 of the 200 had good diets. The postpartum percentage of hemoglobin should never be below 70 per cent.

HARVARD MEDICAL SOCIETY

The December 10 meeting of the Harvard Medical Society was held at the Peter Bent Brigham Hospital with Dr. Henry A. Christian presiding. The medical case was presented by Dr. Lawrence E. Putnam: A forty-four year old housewife entered the hospital five days previously complaining of a "pounding of the heart" of nine hours' duration. She gave a past history of scarlet fever, measles, and mumps in childhood. Ten years ago she experienced the sudden onset of precordial pain and a sensation of pounding of her heart, and was in a hospital for three weeks, during which time the symptoms subsided spontaneously. Since that time she had had frequent attacks similar to the first one, which lasted from a few hours to two weeks. Two years ago she was seen at the Brigham Hospital, at which time physical examination was negative except for a heart rate of 176 beats per minute. Carotid sinus pressure did not slow the rate, but on the second day it caused a fall of the rate to normal. During the month before the present entry she had had frequent attacks, and had been seen in several Boston hospitals in which medication failed to relieve her symptoms.

Nine hours before her admission she was suddenly seized with a severe precordial pain and "pounding of her heart." Physical examination on entry was negative except for a heart rate of 168 beats per minute, and a blood pressure which could not be determined in the brachial artery. Vagal pressure was ineffective in slowing the rate. An electrocardiogram showed paroxysmal tachycardia of auricular origin. Laboratory and x-ray studies were normal. She was given four cubic centimeters of syrup of ipecac every half hour for three doses, which caused vomiting, but had no effect on the heart rate. Three quarters of an hour after the last dose, she received one eighth of a grain of morphine and three grains of luminal. One hour later her heart rate was found to be 86 beats per minute, and her blood pressure 90/60. She stated that fifteen minutes after receiving the last medication she experienced the sudden onset of severe precordial pain which radiated to her left arm. There was abrupt cessation of the pounding of her heart. Previous attacks usually terminated in the same manner.

Dr. Samuel A. Levine remarked that this was a typical case of paroxysmal auricular tachycardia. Attacks usually last an hour or a few days, and it is unusual that they persist for as long as one or two weeks. As a rule there is no cardiac dilatation, although dilatation can occasionally be quite marked. Dr. Christian recalled having seen a case with persistent tachycardia lasting eleven days, which resulted in arterial thrombosis and subsequent dry gangrene of the arm. The use of ether anesthesia during amputation cured the tachycardia.

Dr. Robert Bates presented the surgical case: A fifty-two year old single, white male entered the hospital with a history of severe pain in his right arm and hand of twenty-four hours' duration. One year ago bilateral ligation of the saphenous veins had been performed for varicose veins. The Hinton test at that time was negative. The blood pressure varied from 170/100 to 100/90. He had been followed in the varicose vein clinic. Physical examination on entry revealed a cadaverous appearing right hand. Pulsations were absent in the ulnar artery, but were present in the radial, brachial, and supraclavicular arteries, although they were weaker on the right than on the left. There was a thrill and bruit in the right supraclavicular region. The blood pressure on the right was 130/100, and on the left was 190/100. There was decreased sensitivity to pinprick in the right hand. The white blood count was 20,000; the temperature 100 degrees Fahrenheit. Electrocardiographic and fluoroscopic studies of the heart were negative. There were no cervical ribs. He received passive vascular exercise with a leg pump which led to decrease in pain and return of warmth to the hand. No diagnosis was made, although it was felt that a partial thrombosis of the right subclavian artery might account for the observed signs and symptoms.

Dr. Soma Weiss of the Boston City Hospital spoke on "Types of Syncope: Their Mechanism and Treatment." In studies of hypertension and observation of vasodepressor and carotid sinus reflexes, certain patients were observed who were subject to attacks of fainting. It was thought that the carotid sinus reflexes might be the cause of the syncope, and this possibility was investigated. Subsequently the studies were extended to other types of syncope in an attempt to explain the mechanism of their occurrence. Syncope is a syndrome in which an intimate relationship exists between the central nervous system, the viscera, and particularly the circulatory system.

Syncope may be defined as an acute, transient state of the body in which there is a temporary partial or complete cessation of locomotion, consciousness and occasionally of respiratory and circulatory activity. In spite of the fact that many cases of syncope present an identical clinical picture, the underlying mechanism and treatment is quite different in different cases. Dr. Weiss classified syncope according to the mechanism of production:

1. Vasovagal syncope. The "common faint".
2. Carotid sinus reflex syncope: due to hyperactivity of the reflex.
3. Vagovagal syncope: Adams-Stokes' syndrome of reflex origin.
4. Pleural shock syncope. Many cases so diagnosed have been caused by an air embolus, but syncope actually does occur occasionally from traumatic irritation of the pleura.
5. Pericardial shock syncope. Similar to pleural shock.
6. Peritoneal shock syncope. There is no evidence for the existence of a specific form of shock from peritoneal irritation. Syncope occurring during abdominal paracentesis is probably vasovagal in mechanism.
7. Syncope with central vasomotor stimulation.
8. Adams-Stokes' syncope of nonreflex origin, from complete heart block of sudden onset.
9. Syncope from sudden increase in heart rate. This may be due either to a reflex or to a decrease in cardiac output, or to both.
10. Syncope with attacks of angina pectoris. This may be due to a reflex.
11. Syncope with congestive failure of the circulation.
12. Syncope with postural hypotension.
13. Syncope with engorgement of the central nervous system.
14. Syncope with pulmonary circulatory engorgement.
15. Syncope with a dissecting aneurysm. A dissecting aneurysm is frequently characterized by a tear at the root of the aorta, in which area the depressor nerve runs. Syncope in these cases may be due to depressor nerve stimulation.
16. Nothnagel's syndrome: "vasomotor angina". This may be related to the carotid sinus reflex group.
17. Gowers' syndrome. This corresponds closely to the cerebral type of carotid sinus reflex.

The *vasovagal type of syncope* is quite variant in its manifestations. It may be mistakenly diagnosed as epilepsy, or even as angina pectoris. Dr. Weiss and his associates found that by administering sodium nitrite to normal individuals it was possible to induce all the symptoms of this type of syncope. The normal individual without medication shows certain changes in the cardiocirculatory system upon assuming the erect posture. There is a drop in the systolic blood pressure and a rise in the diastolic pressure, with resultant lowering of the pulse pressure. The heart rate is moderately accelerated. If a subject is given sodium nitrite and then is caused to assume the erect position, there is a progressive drop in both systolic and diastolic blood pressures, and an increase in heart rate. Pallor ensues, and syncope may occur. As soon as the horizontal position is reassumed, the heart rate and blood pressures return to normal.

If patients subject to vasovagal syncope are placed on a tilting-table and tilted toward the erect posture there is an immediate decrease in pulse pressure, and a marked increase in heart rate. There is a temporary rise in the venous pressure in the foot vein, followed by a progressive fall. The blood flow through the hand may be normal for a period but preceding the syncope there is a rapid progressive fall. On resumption of the horizontal position, there is a prompt return of the above enumerated factors to normal levels.

Patients suffering a chronic tendency to this condition are benefited by improved posture and by adequate physical exercise.

Carotid sinus syncope must be considered as being due to one of two different mechanisms: (1) to cerebral ischemia; or (2) to a reflex depression of certain central nervous system centers.

Thus there may be three different types of carotid sinus syncope:

1. Vagal, characterized by (a) cardiac asystole; (b) cerebral anoxemia; (c) being abolished by atropin or adrenalin.

2. Depressor, characterized by (a) fall in arterial pressure; (b) cerebral anoxemia; (c) being abolished by adrenalin (atropin has no effect).

3. Combined, characterized by (a) normal heart rate and blood pressure; (b) normal total cerebral blood flow; (c) not being abolished by drugs.

There may be various combinations of these three types.

Carotid sinus stimulation in a normal individual will produce only a slight slowing of the heart rate. Novocain infiltration of the region of the sinus will abolish the slowing observed in normal individuals, and also the syncope observed in patients with hyperactive reflexes.

The dizziness and fainting observed in some individuals after receiving digitalis are due to an idiosyncrasy, and great sensitivity of the sinus reflex to this drug.

Determinations of the oxygen tension in the blood of the carotid and internal jugular arteries have shown that there is no essential difference between the levels found in a normal individual and in a patient with a purely reflex type of carotid syncope. In cardiac syncope, on the other hand, there is a definite anoxemic stimulus to the nerve endings of the sinus.

In ten patients with unilateral hypersensitivity of the carotid sinus reflex, the carotid sinus nerve was severed, with relief of symptoms, and without ill-effects except in one case in which there was transient high blood pressure and auricular fibrillation.

Vagovagal syncope is a purely vagal reflex. A powerful afferent impulse is carried up the nerve to the vagus center and a resultant powerful impulse is carried down the same nerve, with inhibition of the conduction of the excitatory heart impulse, and at times transient heart block. Dr. Weiss has studied four cases of this type: two in which esophageal diverticuli produced pressure on the vagus and initiated the reflex; one in which a metastatic carcinoma of the thorax caused infiltration of the vagus nerve; and a fourth in which irritation of nerves in the throat produced long pauses in the heart rate. Administration of adrenalin or ephedrin will lessen or abolish these symptoms, although the transient heart block still persists and is unaffected by the medication. Oral or subcutaneous administration of atropin compounds, or novocain infiltration of the vagus completely abolishes these reflexes and prevents the production of the heart block. Small amounts of tincture of belladonna by mouth usually control these cases well. The carotid sinus reflex was found to be normal in these individuals.

The onset of extremely rapid heart rates due either to paroxysmal or to ventricular tachycardia frequently precipitates an attack of syncope. The cardiac output in these cases is markedly diminished, and the decreased blood supply to the brain results in cerebral anoxemia and fainting.

In summary, Dr. Weiss again emphasized the fact that syncope is a symptom and not a definite entity. From a known mechanism in the periphery of the body various types of syncope can be produced which superficially appear identical, but which are in actuality quite dissimilar. The mode of action of these mechanisms in producing syncope depends upon: (1) primary ischemia of the brain; (2) primary inhibition of central nervous system centers; (3) a combination of these two factors.

During the discussion Dr. Weiss stated that the carotid sinus reflex is usually hypersensitive bilaterally, if found to be so on one side, but that cases of unilateral hypersensitivity are sometimes encountered. The reflex is more easily elicited with the patient in the erect rather than in the horizontal position. The frequent variations in the level of the sinus in the neck often make it difficult to locate. If symptoms similar to those complained

of by the patient can be produced by pressure on the carotid sinus, it is logical to assume that hypersensitivity of the reflex is responsible for these symptoms. Hypersensitivity without syncope exists, but most normal individuals fail to show slowing of cardiac rhythm, or show only very slight decrease even though extreme pressure is applied to the sinus. Reports of carotid body tumors have not given any history of coincident syncope, although aneurysmal dilatation of the carotid sinus may cause syncope at times.

DOCTOR WESSELHOEFT ADDRESSES MEDICAL GROUPS

Meeting of the Arlington and Belmont Clubs at the Ring Sanatorium

At a meeting of the Arlington and Belmont Doctors Clubs which was held on Tuesday evening, January 14, at the Ring Sanatorium and Hospital in Arlington Heights, Dr. Conrad Wesselhoeft, Chief of the Haynes Memorial Contagious Hospital, at Brighton, and Associate in Communicable Diseases at the Harvard Medical School, addressed a group of nearly 100 physicians.

Dr. Edwin P. Stickney, of Arlington, voiced the sentiment of those present in an eloquent tribute to the life and work of the late Dr. Arthur H. Ring and to the institution which Dr. Ring and his wife, Dr. Barbara T. Ring, developed to its present status.

Dr. Wesselhoeft spoke on some of the problems in the diagnosis and treatment of scarlet fever. He said that the disease has become generally milder in the last fifty years. Eleven years ago the cause of scarlet fever was discovered, and we now have effectual means of preventing this disease, as well as an antitoxin which, if given early, alleviates the sore throat and fever, and blanches the rash. Unfortunately, the administration of this antitoxin is sometimes attended with severe reactions. Consequently it is not generally given in mild cases. Every attempt is being made to rid this antitoxin of these unfavorable reactions. The greatest danger of scarlet fever now lies in the complications which may occur. While early serum treatment may to some extent lower the frequency of these complications, it cannot be relied upon to do this. Once these complications arise the serum is useless, and the physician must turn to other measures, often of a surgical character.

Dr. Wesselhoeft spoke of the Dick patent which controls the immunizing agent as well as the antitoxin. In his opinion there was no excuse for the continuation of this patent. He said that if there should be the same progress in the treatment of scarlet fever in the next fifty years as that which followed the invention of the telephone fifty years ago, and as many patents were to be taken out as have been taken out on the telephone, the situation in medicine would be unthinkable. He visualized doctors guarding their secret discoveries for patenting purposes instead of sharing with one another each forward step in medicine according to the time-honored custom and ideals of the medical profession. Attention was called to the recent criticism of the Dick patent by the Public Health Council of the League of Nations. He said that the generous support of medical research by the laity demands that physicians should turn over their discoveries for the benefit of all without those restrictions entailed by a legalized commercial monopoly.

Dr. Wesselhoeft's paper was discussed by Dr. Charles A. Atwood, Dr. Edwin P. Stickney, Dr. Edwin H. Place, Dr. James M. Baty, Dr. James H. Townsend and others.

Dr. Hosea W. McAdoo, Medical Director of the Ring Sanatorium and Hospital, presided.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY

The quarterly meeting was held at the Leominster Hospital, January 23. The president, Dr. George P. Norton, called the meeting to order at 4:20 and, after the reading of the records and other preliminary measures, bills before the Legislature were considered.

Several members of the Legislature from the district, comprising an area from Ayer to Athol, had been invited to attend the meeting. Among them were Senator Edward H. Nutting of Leominster, and Representatives Henry A. Estabrook of Fitchburg, and Fred A. Blake of Gardner.

Dr. Alexander S. Begg, Secretary of the Massachusetts Medical Society, discussed the relation of the Society to legislation. He reported that the Society was opposed to Senate 24, which would abolish the several boards of all state institutions and transfer to the Governor and the Executive Council all the powers and duties now resting in the hands of the many boards supervising them. It was felt that this bill savored too much of politics. In this contention, he was supported by the others present.

He explained that the chief medical function of the Legislative Committee of the State Society is to inform the legislators of the attitude of the doctors respecting bills under consideration, especially those for the public interest. There is a single standard governing the practice of medicine in Massachusetts and that standard is a proper and sufficient education. Certain cults claim that special legislation to control medical education is not necessary but it was explained that the Society is not in agreement with them. There have been more than sixty unnecessary fatalities in the state due to cult practice.

House 34 is designed to raise the qualifications of those who apply for registration as physicians and is endorsed by the State Society. Under the proposed bill, only graduates from approved schools may be qualified to practice medicine.

The bill to regulate magnetic healers is opposed because the State Society feels that a single standard is effective.

Opposition was also expressed to the Anti-Vaccination bill and the act for a special board to regulate chiropractors. The State Society has reached

no decision on the bill requiring physicians to register annually, and pay a fee of $2.00.

Representative Estabrook said that it was important to know the doctors and learn their viewpoint. He said that the bills in which the profession is especially interested may be classified as follows: education, public health and compensation. He said that House 34, which is designed to provide one standard for all who practice medicine, would fail because of one definite defect.

"Despite our boasts of educational standards," he said, "Massachusetts, in contrast with every other state, has no standards in medical education."

Such a proposed change as that contained in this bill would act in conformity with the plan of the board of regents in New York, where a candidate for registration in medicine is first obliged to pass an examination of standardized educational requirements. After passing this successfully, he can take the examination for registration in medicine. Such a plan in Massachusetts would promote reciprocity between states. Under present conditions, Massachusetts has been denied recognition throughout the country.

In the absence of these educational standards, students from other states come to Massachusetts and may pass the state registration board after failing elsewhere.

They are then allowed to practice in Massachusetts, thereby giving the state a large number of undesirable practitioners. If there were an amendment to the bill providing for a board of regents it would have a chance of passing, but doubt was expressed of its endorsement, in its present form, by the Legislature.

Representative Estabrook has worked for eight years to have such legislation as this enacted, but has been unable to bring it about.

Senator Nutting said that doctors should become interested in legislation relating to medicine and inform the legislators of their desires, for in no other way can the layman arrive at a satisfactory decision.

Representative Blake said that legislation should not be treated lightly. He felt that the legislators are trying to do the best they can for the public and if an occasional slip is made, it is because they are not informed.

Other business was discussed. A vote of thanks was given to the speakers. The fifty-five doctors present voted that the meeting had been both interesting and enlightening.

The Women's Guild of the Leominster Hospital served a delicious turkey dinner.

FRANCIS M. MCMURRAY, M.D., *Secretary.*

BOSTON TUBERCULOSIS ASSOCIATION

The Annual Meeting of the Boston Tuberculosis Association was held at the Sheltered Shop, 122-A Newbury Street, Boston, Friday, January 24, 1936, at 4 P.M. The following officers were re-elected: Dr. John B. Hawes, 2d., President; Mr. George S. Mumford, Treasurer; Dr. James J. Minot, Vice-President; Mrs. Reginald Heber White, Clerk.

Dr. Hawes, in his annual report, which is the sixteenth he has given before this Association, summarized the salient and important features of the year's work, particularly that of the Prendergast Preventorium and the Sheltered Workshop. By means of a striking graph he showed the gratifying and steady increase in the sales of products made by the ex-patients at the Workshop. He commented on the educational work still being carried on since its beginning in 1927 among the Negroes of the South End district and upon the steady progress being made in the work with the Chinese. In concluding he emphasized as he has many times before that the Boston Tuberculosis Association was not primarily interested in dollars and cents or any figures and statistics or any gains or losses of weight but it is vitally interested in human beings who have tuberculosis and those who are threatened with it, in order that their lives may be made happier and better by this Association.

The annual address which was most illuminating was given by Dr. Cleaveland Floyd, Physician-in-Chief of the Boston Health Department Tuberculosis Clinics and member of the Executive Board of the Boston Tuberculosis Association. He commented on the drop in the tuberculosis death rate from 164.7 to 55.5 in the past twenty-five years, and on the improved facilities for the examination for diagnosis and the care of patients both at home and in the sanatoria. He stated that even today there is not a sufficient number of beds for tuberculous patients in Boston. He also stated that at present the common cold contracted by tuberculous patients makes it one of the greatest factors in causing them to break down a second time.

Dr. Elliott P. Joslin, an abstract of whose address appears below, spoke on "The Prendergast Preventorium Boarding School for Diabetics."

ABSTRACT OF DR. JOSLIN'S ADDRESS

The Boston Tuberculosis Association started something this year when it inaugurated the first Diabetic Boarding School in the country and, so far as I know, in the world. It is true this boarding school is chiefly for underprivileged children, but the significant point is that it is started and that the idea is sound and sure to spread to other communities.

For some years there have been diabetic camps in Massachusetts and, through the efforts of the Universalists and other friends, nearly 100 diabetic girls were cared for at the Clara Barton Homestead in North Oxford last summer. Thanks to the assistance of the Prendergast Preventorium and the ladies of the Unitarian Church, the Preventorium became available for diabetic children this last year and thirty boys had a good vacation thereby. In the autumn it seemed a shame to send them home and during this winter ten or more have been kept at

the Preventorium and allowed to go to school. Diabetic children are prone to tuberculosis and consequently it is especially appropriate for this association to be interested in them.

The arrangements for these children are quite ideal. They have good diabetic care; there are enough of them so that they are not distinctive; thanks to the School Committee of Boston they are provided with facilities for education and while gaining this they are securing diabetic training which will last them for years.

Diabetes for the Diabetics. I firmly believe that the prevention and care of diabetes should rest upon the families of diabetics and upon the diabetics themselves. The number of diabetics who are very poor or very rich is small. There are, I suppose, half a million diabetics in the country and 15,000 in the state of Massachusetts, but the great bulk of them are perfectly capable of looking out for themselves and one another. To the family of a diabetic one should look for the prevention of the disease among other members. This is accomplished, first, by emphasizing the importance of obesity in middle life in favoring the onset of the disease, and, secondly, by the simple rule that one diabetic should not marry another diabetic and thus transmit the disease to the children. In general it is better for a diabetic not to marry into another diabetic family.

Provision for the care and treatment of poor diabetics should be undertaken by diabetics. The more diabetics a patient in good circumstances can make it easy for his own physician or for hospitals and clinics to treat, the better that patient will be treated himself.

Improvement in treatment is what is needed all along the line in diabetes. In general we do not need large sums of money for hospital diabetic beds, but instead moderate sums of money so that the occupants of these beds can be treated better and more expeditiously. Formerly a diabetic would occupy a bed for a month. Now treatment is carried out in ten days or a week, and three or four times as many patients get the benefit for the same cost. With more careful planning, greater attention to the details of the education of the patient and, last of all, with the help of the new and safer insulin, hospital treatment can be speeded up still more.

Arrangements must be provided so that private physicians can secure laboratory facilities as easily as these are obtained by hospital physicians. I believe that a donation of $1,000 annually to each of a dozen or more hospitals in this State for the promotion of its diabetic work, particularly for making available more generally the facilities of its laboratory, would be of infinitely more value than that same sum if expended on the board of a few patients in these same hospitals. We need better facilities and it is true that we doctors need more brains to utilize the treatment already at hand.

At the Prendergast Preventorium, fortunately, the facilities are already available for good medical treatment of the children. A laboratory was erected last year and this is a sine qua non in diabetic treatment. The organization of your Prendergast Preventorium, Mr. President, is splendid and so far as I can see your chief need and the diabetic's chief need is for funds so that you can fill your beds to capacity with diabetic children at $10 a week.

I appreciate the privilege of being able to say a word at this time for the Clara Barton Homestead Camp at North Oxford. That camp, however, not only needs money this year for the board of children but it requires an artesian well, a kitchen with modern refrigeration, and a dining room.

The cost of the diabetic camp and boarding school at the Prendergast Preventorium and the Clara Barton Homestead Camp last year reached about $6,000. This year I certainly hope that more funds will be provided so that both of these camps can be made available to an even greater number of children. For equipment and children, twice this sum could be advantageously expended. I hope you all realize that $10 will do far more than provide board for a child for a week because there are many children whose parents can pay one-half or one-third of this sum, provided the balance is made up. Thus far, I know of exactly $300 available for providing 150 diabetic children a vacation in the camp at the Prendergast Preventorium or at the Clara Barton Homestead Camp, but I am not going to worry about the balance needed because there are 15,000 diabetics in the state of Massachusetts and it is for the interest of each one to help himself or herself by seeing that this opportunity for diabetic children to get a vacation and good treatment is afforded. Every diabetic who is able to do anything for another diabetic should do so. It is bread cast on the waters and is sure to return many, many fold.

Anyone wishing to give money for camps for diabetic children I hope will specify that it is for that purpose and send it either to the Boston Tuberculosis Association for its work at the Prendergast Preventorium or to the Women's National Missionary Association of the Universalist Church at 16 Beacon Street for the Clara Barton Homestead Diabetic camp. Should any funds be sent to me, I will agree personally to be responsible for the expenditure in these two institutions and render an account of the same.

THE NEW ENGLAND PHYSICAL THERAPY SOCIETY

The regular meeting of the New England Physical Therapy Society was held at the Hotel Kenmore, Wednesday evening, January 15, 1936. The council met at six o'clock.

The scientific meeting was held following dinner. Dr. Charles W. McClure, president of the society, presided. The first part of the program was devoted to a report by Dr. DeWitt G. Wilcox of Newton and Dr. William D. McFee of Boston on evaluation and progress in the field of short wave therapy. Dr. Wilcox stated that he had had several cases of pylorospasm, probably partially on a neurotic basis, which

had responded well to short wave therapy after other methods of treatment had failed. He also mentioned three cases of so-called "irritable bladder" (pain and frequency were the two most striking symptoms) which had responded well to treatment. As far as head colds and sinusitis are concerned, Dr. Wilcox believes that he has obtained good results with this form of treatment. Dr. McFee also said that he had obtained good results in frontal sinusitis and described a new electrode he is using in treatment of the prostate gland. In his opinion short wave therapy is a little better than diathermy in many cases, although it will not entirely displace it. Where bone structure is concerned there is definitely more penetration with the short wave.

The chief speakers of the evening were Dr. George Rice and Dr. Nathan L. Fineberg, who spoke on the treatment of hyperesthetic rhinitis and the modern treatment of the common cold. Dr. Rice first showed slides demonstrating the anatomy of the nose and the paranasal sinuses. He then discussed the etiology of hyperesthetic rhinitis, with polyposis as a frequent complication of this disease. If the irritable areas are not too extensive, early cauterization helps. The condition is usually allergic in background, but this may not always be true. In the allergic state eosinophils are usually present in the nasal secretions. If the nasal mucosa is desensitized in these patients, usually there is clearing up of the associated asthma. The condition is either periodic (seasonal) or chronic. In seasonal types careful search for the causative agent is important. As for the treatment of the nose, there have been three types of procedure: ionization methods, cauterization with full strength phenol, and diathermy. Preliminary cocaine anesthesia is necessary and correction of underlying nasal deformities, if any, must be effected as a preliminary measure. Dr. Fineberg discussed ionization methods in a little more detail, especially as developed by Warwick, and reported good results with this form of treatment in patients with marked hay fever and asthma and has also obtained satisfactory results with ionization in atrophic rhinitis and ozena. The most striking successes have been obtained in seasonal hay fever after it has developed; he also feels that there is a good chance of clearing up associated asthma, if that is present. Results have not been good with asthma unrelated to hyperesthesia in the nose. The speaker also emphasized the importance of correcting underlying deformities in the nose.

In discussing atrophic rhinitis, Dr. Rice indicated that he had obtained good results by the use of ultraviolet light, and proceeded to discuss the modern treatment of the common cold. He stressed the importance of general hygiene and good physical condition, and mentioned local and general methods of treatment of the cold itself. Rest in bed, at least for the first twenty-four hours, hot drinks, and foot baths are important adjuncts to treatment. He has used sodium iodide subcutaneously and also nonspecific protein injections. Two grain doses of ammoniated quinine are also recommended, and ultraviolet light and radiothermy often help. After the acute stage is over, argyrol packs in the nose relieve ethmoiditis and complications.

In discussing this paper, Dr. Fineberg pointed out the importance of attending to the patient's general condition, both in treatment and prevention.

A general discussion followed and Dr. McClure closed the meeting with a few words on the importance of diet, proper nutrition, and food elements in health and disease.

PHYSICIANS' ART SOCIETY

At a meeting held December 10, 1935, the following officers were elected:

President: Dr. Frederic J. Cotton.
Vice-President: Dr. Fritz B. Talbot.
Secretary-Treasurer: Mr. James F. Ballard.
Executive Committee: Dr. Eli C. Romberg (3 years), Dr. Lewis W. Hill (2 years), Dr. Somers H. Sturgis (1 year).

The Society has been very fortunate in enlisting the interest of Doll and Richards, who have offered the free use of their galleries for the spring exhibition. This will be held from April 27-May 9 and details will be published later. It is felt that the interest of such a prominent gallery does much to stimulate the Society, and it is urged that all members prepare new material, as nothing will be accepted that has been shown at any of the previous exhibitions. In addition to paintings, drawings and sculpture, other creative specimens of handicraft are eligible. Photographs will not be accepted. There is no limit to the number of subjects which can be sent by any one man, but a professional jury will select a limited number, and supervise their hanging.

All physicians who are interested in art and craftsmanship are cordially invited to join the Society. Application should be made to Mr. Ballard at the Boston Medical Library.

WILLIAM HARVEY SOCIETY

The William Harvey Society met at the Beth Israel Hospital, January 10, 1936, with Dr. W. F. Stearns presiding. Dr. H. Houston Merritt, associate in neurology at Harvard Medical School, read the paper of the evening on "Syphilis of the Nervous System."

The important aspect of a syphilitic infection is the outcome of the disease fifteen or twenty years after the primary lesion, when the central nervous system and cardiovascular involvement overshadow the relatively unimportant first and second stages of the disease.

Bruusgaard's study of 473 cases of untreated syphilis some forty years after the detection of the disease showed that twenty-two per cent had died of causes other than syphilis, twenty-eight per cent

had no clinical evidence of syphilis, but had negative serology. Fourteen per cent had positive serology, but no symptoms or clinical manifestations of the disease. Nine and five-tenths per cent suffered from neurosyphilis, twelve and eight-tenths per cent from cardiac syphilis, and thirteen and five-tenths per cent from syphilis of the skin and bones.

In contrast to these figures, Dr. Merritt cited the results obtained by Moore from adequate therapy:

Type of syphilis		Probable outcome, expressed in approximate per cent		
Original diagnosis	Ultimate outcome	Untreated	Inadequately treated	Thoroughly treated
Early syphilis	Serious late syphilis	25	35-40	5-10
	Benign late syphilis	15	15	5
	Latent syphilis	30	30	5
	"Cure"	30	15-20	80-85

Consideration of these comparative figures clearly shows the value of early and thorough therapy of every case of syphilis.

Central nervous system involvement due to syphilis is seen more frequently in males than in females, and the white race is much more prone to develop lesions in this region than is the Negro race. Some investigators believe that ninety per cent of white males contracting syphilis develop central nervous system involvement to some degree. The true incidence of central nervous system involvement in the white male is probably not so high as indicated by these figures, but nevertheless is strikingly common.

Syphilitic involvement of the central nervous system may be classified in the order of increasing severity:

1. Asymptomatic
2. Meningeal
3. Vascular
4. Gumma
5. Tabes Dorsalis
6. Dementia Paralytica

Abnormalities in the spinal fluid are of great importance diagnostically, and are an indication of the efficacy of therapy. Although thirty-five per cent of individuals with syphilis exhibit abnormal spinal fluid findings in the first thirteen to eighteen months after infection, those with positive findings three or more years after infection are the cases which will develop serious nervous system involvement if not treated properly. It is in this and earlier stages that therapy is most effective and can be expected to prevent the development of serious parenchymatous involvement. Dr. Merritt advocates a spinal puncture and study of the spinal fluid in all cases of early syphilis before treatment is discontinued, and as soon as the diagnosis is made in the cases of late syphilis. A normal spinal fluid two years after infection is almost certain indication that there will be no nervous system involvement at a later date. A markedly abnormal fluid means that serious neurosyphilis will most certainly develop unless proper therapy is given.

Acute syphilitic meningitis is not caused by arsenicals as was formerly believed by some workers, but is due to spirochetal invasion of the meninges. Sixty-four per cent of cases occur during the first year of infection, and there is a subsequent steady fall in incidence. The blood Wassermann in a series of seventy-four cases was negative in thirty-five per cent. Hinton determinations are more accurate, and this percentage of negative results would be much lower for this test. A large percentage of the cases of syphilitic meningitis develop an acute hydrocephalus, and practically all show an elevation of spinal fluid pressure. Signs of meningeal irritation and choked discs are also common manifestations. Paralyses of the cranial nerves occur in the basilar type, the eighth, seventh and third being most frequently involved. Pathologically acute syphilitic meningitis is characterized by small round cell infiltrations of the meninges and the blood vessels in the superficial layers of the brain.

Vascular neurosyphilis may occur early or many years after the primary lesion, and a large percentage of cases may have a negative blood Wassermann; a smaller number of cases also have negative spinal fluid serology. The symptoms are those of a focal cerebral lesion, i.e., hemiplegia, hemianopia, aphasia, etc. The differential diagnosis of a cerebral thrombosis due to arteriosclerosis and that due to luetic endarteritis may be very difficult, but if symptoms indicative of such an accident occur in a comparatively young individual with a normal blood pressure, syphilis should be seriously considered and the spinal fluid examined to exclude it.

Gummata of the central nervous system are extremely rare, and therefore of little clinical importance. When present, surgical removal is usually necessary.

Involvement of the spinal cord by syphilis usually takes the form of a meningomyelitis, vascular thrombosis, chronic anterior poliomyelitis or tabes dorsalis. Except for tabes dorsalis these manifestations are rather rare.

Tabes dorsalis is characterized by paresthesiae, shooting pains, disturbance of gait, vision, and sphincter control and the so-called "tabetic crises". The Romberg sign is frequently present, the deep reflexes are absent and position sense is lost in the

feet. The true Argyll Robertson pupil is found in more than fifty per cent of the cases.

The Argyll Robertson pupil is almost pathognomonic of central nervous system syphilis and may be defined as having the following characteristics:

1. A retina which is sensitive to light. (An intact retina and visual pathway.)
2. The pupil is miotic. (Due to paralysis of the sympathetic innervation of the iris.)
3. The pupil maintains a constant size regardless of the amount of light admitted to the eye. (Due to paralysis of the light reflex fibers.)
4. Active accommodation of the pupil for near objects is maintained. (Showing an intact pathway from the cortex to the third nucleus, and from the third nucleus to the ciliary muscles of the eye.)
5. Imperfect dilatation following instillation of atropine and absence of dilatation when painful stimuli are applied to the skin. (Characteristic of paralysis of the sympathetic innervation of the eye.)

Dr. Merritt discussed the anatomical location of the lesion which would produce these symptoms, and stated that the Argyll Robertson pupil indicates parenchymatous involvement of the central nervous system, and although not absolutely diagnostic of any one form of neurosyphilis, is suggestive of involvement of the tabetic or dementia paralytic type.

Dementia paralytica is the most severe of the various manifestations of central nervous system syphilis. Change of personality, mental deterioration, hallucinations, euphoria, speech and writing defects, convulsions, reflex disturbances, and Argyll Robertson pupils in combination are pathognomonic of paresis.

Pathologically, paresis is characterized by a generalized infiltration of the meninges, blood vessels and occasionally the cortical substance with plasma cells, and degenerative changes in the nerve cells. Deposits of iron pigment in the microglia and in the walls of the blood vessels in the brain, as revealed by special iron stains, have come to be regarded as diagnostic of paresis. Spirochetes can be demonstrated in the cortical tissues.

Spirochetal invasion of cortical matter is probably not the only cause of the lesions observed in paresis. The blood vessel changes characteristic of paresis and the subsequent decrease in blood supply probably play a large part in the degenerative changes.

Therapy of central nervous system syphilis with various arsenical preparations has proved of great benefit. Arsphenamine is of greatest value in the treatment of the early stages of syphilis, but has been superseded by the less toxic neoarsphenamine in the later stages of the disease. Tryparsamide is almost specific for central nervous system syphilis, but is ineffectual in treating other luetic manifestations.

Fever, artificially induced by means of diathermy or malaria has been the greatest recent advance in the treatment of neurosyphilis. The malaria method of hyperthermia consists in the infection of the patient by intravenous administration of blood from an individual with malaria, and allowing the patient to experience ten to fifteen attacks of chills and fever. Cure of the malaria is easily achieved by the oral administration of quinine. Tryparsamide therapy should be instituted immediately after completion of the fever treatment. In dementia paralytica, clinical cures occur in percentages varying between twenty and thirty-six per cent of the cases so treated, and partial relief is obtained in fourteen to fifty per cent of cases. Modern methods of therapy have changed central nervous system syphilis from a disease with a hopeless prognosis to a disease with a favorable outlook.

HAMPDEN DISTRICT MEDICAL SOCIETY

The Winter Meeting was held at the Springfield Academy of Medicine, 20 Maple Street, Springfield, on Tuesday, January 28, 1936, at 4:15 P.M. Dr. Theodore S. Bacon, President, was in the Chair. About 120 members attended.

The Secretary read a letter from Dr. Charles G. Miles of Brockton, a member of the Legislature, regarding a bill to be introduced affording better protection to physicians called on for services in connection with automobile accident cases and appealing for funds for the purpose of giving radio addresses. The Society voted to appropriate the sum of twenty-five dollars toward this purpose. An invitation to the New England States Regional Conference on Birth Control was read.

The paper of the afternoon was by Dr. John Homans of the Peter Bent Brigham Hospital and the Harvard Medical School, Boston, on the subject of "Thrombosis in Veins as a Complication of Medical and Surgical Diseases." Dr. Homans discussed the causes and manifestations of such thrombosis, especially postoperative and posttraumatic, the possible sequelae, such pulmonary emboli, and the methods of prophylaxis and treatment. The paper was discussed by several members and questions answered. A rising vote of thanks was given Dr. Homans for his very interesting and practical presentation, and a buffet supper was served.

ANDREW PETERS, M.D., *Reporter.*

ROBERT BRECK BRIGHAM HOSPITAL CLINIC

Osteoarthritis was the subject of a clinic held at the Robert Breck Brigham Hospital, Wednesday, January 29, 1936. Two cases were presented. The first, a Scotch baker, aged fifty-seven, had been troubled for ten years with pain in both knees. No other joints gave symptoms. During the past year he had been forced to give up two jobs because of the great pain he experienced when standing for any length of time.

The patient was short, stocky, muscular, and weighed 160 pounds. The positive physical findings were absence of teeth, round shoulders, large

abdomen, prominent knee joints, slight bowing of the legs, and flat feet. All laboratory tests including the usual blood and urine studies, Hinton test, gonorrheal complement fixation, blood uric acid, prostatic smear, and basal metabolic rate were within normal limits. X-rays revealed osteoarthritic changes in the hands, knees, feet, spine, and pelvis with marked spur formation and well-defined calcareous deposits, particularly in relation to tendinous attachments.

The second patient, a woman, aged fifty-one, had been troubled with increasing disability of the hip joints for twelve years. On admission she could walk with a cane. Other joints were symptom-free except the knees, to which pain was referred from the hips.

She was a short, stout woman weighing 145 pounds. The striking physical finding was the great limitation of motion in the hips, certainly less than half the normal range. Laboratory data were not unusual although the sedimentation rate was 47 mm./hr. (Westergren). X-rays showed great changes in the hip joints with mushrooming of the femoral head, shortening of the neck of the femur, narrowing of the joint space, shelving of the acetabulum, and generalized atrophy.

In the discussion it was suggested that certain similarities existed in the two patients, i.e., they were over fifty years of age, the arthritic symptoms had been gradually developing over a ten-year period, the larger joints were involved, both were overweight, they ran an afebrile course, blood counts and hemoglobin were normal, and improvement was achieved with supervised bedrest with graded postural exercises. The possibility of a developmental anatomic variation with respect to the hip joints in the second patient was mentioned as possibly contributing to the unusual change as demonstrated by x-ray.

The conclusion was reached in each case that it was doubtful if osteoarthritis could account for all the pathology demonstrated by x-ray. The element of wear and tear on large weight-bearing joints together with long-repeated intra-articular trauma gave sufficient grounds, however, for grouping these cases in that category which includes degenerative hypertrophic or osteoarthritis.

With protection to the joints involved, the knees in one case and the hips in the other, and graded weight-bearing exercises, it is to be expected that both patients will again take up their usual work within a three to six months period.

ESSEX NORTH DISTRICT MEDICAL SOCIETY

The semi-annual meeting of the Essex North District Medical Society was held at the Riverside Tavern, Wednesday, January 8, 1936. Dinner was served at 12:30 P. M. after which the meeting was turned over to Dr. Charles E. Mongan of Somerville, President of the Massachusetts Medical Society, by Dr. Warren of Amesbury, President of the District Society.

Dr. Mongan requested the coöperation of the Fellows in the Society and touched briefly on the service the Society offers to its Fellows.

Dr. W. Reid Morrison of Boston, Chairman of the Committee of Arrangements for the Annual Meeting, was then introduced by Dr. Mongan. Dr. Morrison outlined the plans for the meeting to be held in Springfield, June 8, 9, and 10 and urged every member to attend.

Dr. Mongan next presented Dr. Alexander S. Begg, Secretary of the State Society, and Dean of the Boston University School of Medicine. Dr. Begg asked that all Fellows get behind the Society in support of the legislation for elevation of the standards for admission to practice in Massachusetts. He forcefully emphasized the point that Massachusetts has the lowest standard of any state in the Union for the registration of physicians and the only state that does not give the Board of Registration power to discriminate against inferior medical schools. The Massachusetts Medical Society has been trying for several years to remedy this condition and it was suggested that if the Legislature continued to refuse changes the fight would be taken to the people.

Dr. Begg also discussed the proposed law of reregistration of physicians, estimating that, if this law were put into effect, approximately one thousand illegal physicians would probably be discovered, whom the Board of Registration in Medicine is now unable to locate.

Dr. Channing Frothingham of Boston, Vice-President of the Massachusetts Medical Society and Chairman of the Subcommittee on Public Health and Practitioner, asked that immunization work and other public health measures be more actively carried on by private practitioners. This brought out the fact that the State Department of Public Health does not wish to continue this work after the people have been educated to go to their family physicians for this service.

Dr. Michael A. Tighe of Lowell, Chairman of the Subcommittee on Social Legislation and Insurance, was introduced by Dr. Mongan. Dr. Tighe reminded the Fellows that the House of Delegates of the American Medical Association, in February, 1935, went on record as opposed to Compulsory Sickness Insurance, because of the interposition of politics between the medical practitioner and the public. He called attention to the fact that the Public Relations Committee and Council had endorsed this stand and had resolved that they should endeavor to educate the public regarding the evils incident to the workings of Compulsory Sickness Insurance. Evidence of coöperation of the press was shown by Dr. Tighe, and the endorsement by the press of the attitude of the Massachusetts Medical Society in this matter.

The business meeting of the District Society was opened by Dr. Warren, the president. The minutes in abstract were read by the Secretary. The resolution on the death of Dr. Edward F. Lawlor of Lawrence was read, and voted to be spread on the records and a copy sent to his family. The com-

mittee on the resolutions on the death of Dr. John Massé of Lawrence was not ready to report.

Dr. Burnham of Lawrence called attention to the fact that the District Society, in its membership records the name of every eligible physician in the District. Twenty-five per cent of these are not Fellows of the American Medical Association as compared with sixty per cent who are not Fellows in the state.

Dr. Burnham urged support of the Legislature on annual reregistration of physicians in order to provide an investigator by the Board of Registration in Medicine. A two-dollar fee from each physician would yield approximately $12,000 annually, he stated.

Dr. F. W. Snow of Newburyport, Chairman of the Committee on Revision of By-Laws, reported that the committee met on January 3, 1936. Dr. Snow read the revisions, which were advised by the Committee, and it was moved and seconded that the recommendations be accepted.*

It was moved that the communities within the jurisdiction of the Essex North District Medical Society be grouped as follows, for the organization of the Committee on Public Relations:

1. Lawrence.
2. Methuen.
3. Haverhill, Groveland, Georgetown, Merrimac, Boxford.
4. Andover, North Andover.
5. Amesbury, Salisbury.
6. Newburyport, West Newbury, Newbury, Rowley.

Dr. Burnham objected to the splitting up of the Greater Lawrence district, the objection was not carried, and the original motion was seconded and unanimously adopted.

After explanatory remarks, Dr. Edward Mack Smith moved that a committee of five, not officers and not residents of Lawrence, be appointed by the Chair (a member ex-officio) to report, with a request to publish, whether the constitution has been followed in recent Board of Trial cases. The motion was seconded and unanimously adopted.

In the reports of the City Committees, the study of the City Physicians in Haverhill was presented. It was brought out that the three City Physicians in 1935 made approximately twelve thousand calls with an average gross compensation of fourteen and one-half cents per call.

Studies on free work by the Staff of the Gale Hospital showed that on a conservatively estimated fee basis, the physicians were contributing over eighty thousand dollars' worth of service to the city's poor each year without receiving any financial return.

The Committee felt that some of the work now being done by the City Physicians could properly be transferred elsewhere, that ultimately the inadequate compensation for this work must be considered if the city arrives at the position of being able to pay a fee basis for services rendered.

*See Appendix.

A "panel" system was suggested whereby the patient could choose from a list of physicians who were willing to do this work on a reduced fee basis. It was also recommended that a central office be provided to facilitate the work of the City Physicians.

By unanimous consent of every physician in the city, lodge practice will not be carried on by any physician.

The meeting adjourned at 5 P.M.

E. S. BAGNALL, M.D., *Secretary.*

APPENDIX

Revisions of the By-Laws of the Essex North District Medical Society Recommended by the Committee on the Revision of By-Laws.

ARTICLE I

(Unchanged)

Fellowship

The Society shall be called the Essex North District Medical Society and shall consist of all the Fellows of the Massachusetts Medical Society credited to it by the latter, and residing in the cities of Haverhill, Lawrence and Newburyport, and in the towns of Amesbury, Andover, Boxford, Georgetown, Groveland, Merrimac, Methuen, Newbury, North Andover, Rowley, Salisbury, and West Newbury, and also all other Fellows credited by the Massachusetts Medical Society and residing elsewhere.

ARTICLE II

(Changed)

Meetings

SECTION 1. There shall be held each year the three stated meetings of the Society, on a Wednesday in January, May, and October respectively. The meeting in May shall be the annual meeting, and shall be held on or before the fifteenth of the month.

SECTION 2. Special meetings for social, scientific, or other purposes may be called, from time to time, by the President on his own initiative, or at the written request of five members. At a special meeting, there shall be transacted only such business as is specified in the call of the meeting.

SECTION 3. (A) At the annual meeting, there shall be elected by ballot the officers of the Society, as provided for in Article III, the Councilors, the Censors, the Committee of three on Funds, a Commissioner of Trials for the Massachusetts Medical Society, a Correspondent to the official organ of the Society, a Committee on Public Relations, a Delegate to the Public Relations Committee of the State Society who shall serve as chairman of the District Public Relations Committee, all of whom shall hold office for one year, or until their successors are elected.

(B) The Councilors shall be elected in number equal to one for every thirty active and retired Fellows, and a majority fraction thereof as of January 1. One Councilor and one Alternate shall be designated by the nominating committee to act as members

of the nominating committee of the Council.

(C) The Censors shall be five in number, and must be elected from members of at least ten years' fellowship. One Censor, who must also be a Councilor, shall be designated by the nominating committee as Supervisor.

(D) All officers and members of the committee shall assume office on the day of election.

(E) At the annual meeting, the nominating committee, the treasurer and the auditor shall present their respective reports.

SECTION 4. Five members shall constitute a quorum, but a less number may adjourn the meeting, from time to time.

ARTICLE III
(Changed)
Officers

The officers shall consist of a President, a Vice-President, Secretary, Treasurer, and Auditor. One Fellow may serve as Secretary and Treasurer.

ARTICLE IV
(Formerly Article V—except for last sentence, which was stricken out)
Duties of the President and Vice-President

The President shall call to order and preside at all meetings of the Society, and shall have all the powers usually accorded to a presiding officer. He shall also perform such other duties as may devolve upon him as Vice-President ex-officio of the State Society.

In the absence of the President, his duties shall be discharged by the Vice-President; and in the absence of both these officers, a chairman shall be chosen by the Society.

ARTICLE V
(Formerly Article VI—except for last sentence, which was stricken out)
Duties of the Secretary

The Secretary shall have charge and custody of the By-Laws, Records and other papers of the Society; he shall send to each member a printed notice of each meeting of the Society, and keep a fair record of all its doings, and read at the meetings all such communications as the President may direct to be made; he shall notify the chairman of each committee appointed by the Society, in each case stating the commission and names of the committee, and he shall perform such other duties as may be assigned to him, or as are required by the By-Laws of the Massachusetts Medical Society, or by any vote of said Society or its Councilors.

ARTICLE VI
(Replaces former Article VII)
Duties of the Treasurer

The Treasurer shall collect all moneys due the Society, except such as are otherwise especially provided for. He shall keep an accurate account of all receipts and disbursements, and shall make disbursements for all routine expenses under the authority of the Executive Committee or as may be ordered by vote of the Society in any regular meeting assembled. He shall annually make to the Society a written report of the state of the treasury, and shall subject all his accounts to the inspection of the Auditor. He shall also perform the duties required of him by the By-Laws of the Massachusetts Medical Society, or by any vote of said Society or its Councilors. He shall act as Secretary of the Committee on Funds, but without a vote.

ARTICLE VII
(Replaces former Article VIII)
Of the Invested Funds

The general care and management of the permanent funds of the Society, including those now in hand and any that may hereafter be acquired, shall be invested by the Committee on Funds,—subject, always, to such directions as may be given from time to time by the Society.

The duties of the committee in this regard shall be:

1. To treat each separate gift or legacy, or other acquisition designed for permanent investment, from whatever source received, as a separate and independent fund, designating it be either the name of the donor, or some other indicative of the use to which it is made applicable.
2. To keep all such funds constantly invested in interest bearing securities, having at all times, in the selection of such securities, particular regard to the safety of the principal rather than to the rate of interest to be obtained.
3. To expend, or cause to be expended at their discretion, the income derived from these investments, for the purposes authorized by the terms under which the several funds are or shall be held, and for no other.
4. To keep in a book provided for the purpose an account current with each fund,—which book and account shall at all times be open to the inspection of any member of the Society who may desire to examine them.
5. To lay before the Society at every annual meeting, in writing and in detail, a complete report of the transactions of the year preceding, stating for each fund the income received, the expenditures made (and for what), its present condition, and the name, character and amounts of the several securities in which it is held.

ARTICLE VIII
(New)
Public Relations Committee

SECTION 1. The Public Relations Committee shall consist of one representative from each community or group of communities, as defined by the Society, who will be elected by ballot. The Public Relations Committee is to study the relations of the Medical Profession and the Society with the Public, and will make such recommendations as may be indicated, from time to time, and take such action as may be directed by the Society. It shall also serve as an executive committee and a nominating committee.

SECTION 2. Each community or group of communities, shall be represented by a local Committee on

Public Relations. Members of these local committees shall be appointed by the Public Relations Committee.

SECTION 3. The chairman of each local committee shall be a member of the Public Relations Committee.

SECTION 4. The President and Secretary of the Society shall be members of the Public Relations Committee.

ARTICLE IX

Amendment of By-Laws

The Society shall, at its discretion, incorporate into its By-Laws at a stated meeting, by a majority vote and without previous notice, the substance of any vote or resolution passed by the Councilors of the State Society, and affecting the duties, rights or privileges of this Society, or of any of its officers. Otherwise the By-Laws of this Society may be amended by an affirmative vote of two-thirds of the members present and voting at a stated meeting; provided that notice of the proposed amendment shall have been given in writing at a previous meeting, and notice of the same sent by the Secretary to each member of the Society.

MASSACHUSETTS GENERAL HOSPITAL

A Clinical Meeting of the Staff of the Massachusetts General Hospital will be held in the Moseley Memorial Building, on Thursday, February 27, 1936, at 8:15 P.M.

PROGRAM

1. Artificial Menopause in the Treatment of Carcinoma of Breast. G. W. Taylor, M.D.
2. Is It Angina Pectoris? H. B. Sprague, M.D.

Physicians, medical students, nurses and social workers are cordially invited.

Committee on Hospital Meetings,
WILLIAM B. BREED, M.D., *Chairman*,
MARSHALL K. BARTLETT, M.D., *Secretary*.

BOSTON CITY HOSPITAL

STAFF CLINICAL MEETING

Wednesday, February 26, 1936, at 8:15 P.M., Cheever Amphitheater.

Contributions of Medical Social Service to Diagnosis, Treatment and Prevention.

The Function of Medical Social Service. Dr. Merrill Moore and Miss Mabel R. Wilson.

Case Presentations: I. Surgical Social Problems. Dr. Charles C. Lund. II. Medical Social Problems. Dr. George P. Reynolds.

The Patient in His Social Environment. Dr. George R. Minot.

COMMITTEE ON HOSPITAL CLINICS.

CLOVER HILL HOSPITAL

Lawrence, Mass.

The next medical meeting of the Clover Hill Hospital will be held in the reception room of the hospital at 161 Berkeley Street, Lawrence, on Thursday evening, February 27, 1936, at 9 P.M.

Speaker: Louis E. Phaneuf, M.D., of Boston.

Subject: The Management of Uterine and Vaginal Prolapse.

The lecture will be illustrated with lantern slides. Discussion will follow. All physicians of Lawrence and vicinity are cordially invited to attend.

Clover Hill Hospital,
N. F. DECESARE, M.D., *Chairman*.

NEW ENGLAND HOSPITAL ASSOCIATION

The annual meeting of this Association will be held February 27, 28, and 29 at the Hotel Statler, Boston.

On February 28 there will be a special section meeting for Trustees.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

The Annual Meeting of the members of the American Society for the Control of Cancer will be held at the office of the Society, Room 1501, 1250 Sixth Avenue, New York, N. Y., on Friday, March 6, 1936, at 3:30 P.M.

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held in the Peter Bent Brigham Hospital Amphitheatre (Shattuck Street Entrance), Tuesday evening, February 25, at 8:15 P.M.

PROGRAM

Presentation of Cases.

Spontaneous Hypoglycemia. By Dr. Russell M. Wilder, Mayo Clinic, Rochester, Minnesota.

Medical students and physicians are cordially invited to attend.

MARSHALL N. FULTON, M.D., *Secretary*.

NEW ENGLAND HEART ASSOCIATION

The next meeting of the New England Heart Association will be held at the Memorial Hospital, Worcester, Mass. (Knowles Hall, Nurses' Home), Monday, February 24, 1936, at 8:00 P.M.

PROGRAM

1. Effects of Contagious and Infectious Diseases on the Heart.
   A. General Statement of Main Topic. Dr. O. H. Stansfield.
   B. Late Results of Contagious and Infectious Diseases on the Heart. Dr. E. H. Halloran.
2. Acute Benign Pericarditis. Dr. F. B. Carr.
3. Coronary Symptoms in Pernicious Anemia. Dr. J. J. Dumphy.

All members of the New England Heart Association and interested physicians are invited to attend.

JAMES M. FAULKNER, M.D., *Secretary*.

THE NORFOLK DISTRICT MEDICAL SOCIETY

A regular meeting of the Society will be held in the Massachusetts Memorial Hospitals, 82 East Concord

Street, Boston, Tuesday evening, February 25, 1936, at 7:00 P.M.

PROGRAM

7-8:15 P.M.

Inspection of new building. (Especially the operating rooms and viewing gallery.)

Demonstration of Mechanical Heart. Dr. George Levene.

Demonstration of Electrocardiograph. Dr. William Reid.

8:15-10 P.M.

Address of Welcome. Dr. Henry Pollock, Superintendent, Massachusetts Memorial Hospitals.

The Clinical Diagnosis of Hyperthyroidism. Dr. Howard Clute.

Congenital Factors in Urinary Infections. Dr. Samuel Vose.

Is There an Inheritable Tendency to Practice Medicine Successfully? Dr. Reginald Fitz.

Complications in Mumps. Dr. Conrad Wesselhoeft.

10:00 P.M.

Refreshments—Talbot Memorial.

FRANK S. CRUICKSHANK, M.D., *Secretary.*

CARNEY HOSPITAL

CLINICAL MEETING

The next clinical meeting of the Carney Hospital will be held on Monday, February 24, at 8:30 P.M.

Subject: Thoracic Surgery by Dr. John Strieder (Lantern Slides).

Physicians and medical students are invited to attend.

SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

CALENDAR OF BOSTON DISTRICT FOR THE WEEK BEGINNING MONDAY, FEBRUARY 24, 1936

Monday, February 24—

*8:30 P.M. Carney Hospital, Clinical Meeting.

Tuesday, February 25—

*9-10 A.M. Boston Dispensary, 25 Bennet Street, Boston. Case Presentation. Dr. Francis McDonald.

2:30 P.M. Pediatric Ward Visit. Massachusetts Eye and Ear Infirmary.

7 P.M. Norfolk District Medical Society. Massachusetts Memorial Hospitals, 82 East Concord Street, Boston.

*8:15 P.M. Harvard Medical Society. Peter Bent Brigham Hospital Amphitheatre (Shattuck Street Entrance).

Wednesday, February 26—

*9-10 A.M. Boston Dispensary, 25 Bennet Street, Boston. The Present Rôle of the General Surgeon in a Modern Hospital. Dr. Hilbert F. Day.

†12 M. Clinico-Pathological Conference. Children's Hospital.

8:15 P.M. Boston City Hospital Staff Clinical Meeting, Cheever Amphitheatre.

Thursday, February 27—

New England Hospital Association. All day session. Hotel Statler, Boston.

*8:30-9:30 A.M. Clinic, Surgical and Orthopedic Staffs of Children's Hospital, at the Children's Hospital.

*9-10 A.M. Boston Dispensary, 25 Bennet Street, Boston. Diabetic Clinic. Dr. Jacob Schloss.

*3:30 P.M. Medical Clinic at the Peter Bent Brigham Hospital.

*8:15 P.M. Massachusetts General Hospital, Clinical Meeting of the Staff, Moseley Memorial Building.

Friday, February 28—

New England Hospital Association. All day session. Hotel Statler, Boston.

*9-10 A.M. Boston Dispensary, 25 Bennet Street, Boston. Physiological Adventures Abroad. Dr. G. Philip Grabfield.

12 M. Massachusetts General Hospital. Clinical Meeting of the Staff of the Children's Medical Service. Ether Dome.

Saturday, February 29—

New England Hospital Association. All day session. Hotel Statler, Boston.

*9-10 A.M. Boston Dispensary, 25 Bennet Street, Boston. Presentation of Ward Case. Dr. H. Magendantz.

*10-12. Staff rounds at the Peter Bent Brigham Hospital.

Sunday, March 1—

4 P.M. Free Public Lecture, Harvard Medical School, Building D, Longwood Avenue. Appendicitis. Dr. Reginald Fitz and Dr. E. C. Cutler.

*Open to the medical profession.
†Open to Fellows of the Massachusetts Medical Society.

February 20—New York Harvey Society will meet at the New York Academy of Medicine.

February 20—The Journal Club of the Department of Obstetrics, Harvard Medical School, will meet at 8:15 P.M. at the Boston Lying-in Hospital.

February 24—Carney Hospital Clinical Meeting. See notice elsewhere on this page.

February 24—New England Heart Association. See page 398.

February 24—Springfield Medical Association, 8:30 P.M. at the rooms of the Springfield Academy of Medicine, 20 Maple Street.

February 24 to May 16—International Medical Postgraduate Courses in Berlin. See page 1211, issue of December 12, 1935.

February 25—Harvard Medical Society. See page 398.

February 26—Boston City Hospital Staff Clinical Meeting. See page 398.

February 27—Medical Clinic at the Peter Bent Brigham Hospital. See page 385.

February 27—Massachusetts General Hospital, Clinical Meeting of Staff. See page 398.

February 27—Clover Hill Hospital, Medical Meeting. See page 398.

February 27, 28, 29—New England Hospital Association. See page 398.

March 2-6—The American College of Physicians. See page 91, issue of January 9.

March 6—American Society for the Control of Cancer. See page 398.

March 13—William Harvey Society, Beth Israel Hospital, Boston, at 8 P.M.

April 20-24—A Postgraduate Institute in Philadelphia. See page 224, issue of January 30.

June 15-19—The Executive Board of the Catholic Hospital Association will meet at the Fifth Regiment Armory, Baltimore, Md.

June 16-July 28—Summer Course in Bacteriology. See page 385.

September, 1936—First International Conference on Fever Therapy. See page 1325, issue of December 26, 1935.

October 19-23—Clinical Congress of the American College of Surgeons. See page 180, issue of January 23.

DISTRICT MEDICAL SOCIETIES

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

March 4—Wednesday. Lynn Hospital. Clinic 5 P.M. Dinner 7 P.M. Speaker: Dr. Timothy Leary. Subject: Arteriosclerosis.

April 1—Wednesday. Essex Sanatorium, Middleton. Clinic 5 P.M. Dinner 7 P.M. Speaker: Dr. Richard H. Overholt of the Lahey Clinic. Subject: Chest Surgery.

May 7—Thursday. Censors' Meeting.

May 13—Wednesday. Annual Meeting. Salem Country Club. Dinner at 7 P.M. Speaker: Dr. Paul White. Subject to be announced later.

R. E. STONE, M.D., Secretary.
88 Lothrop Boulevard, Beverly.

FRANKLIN DISTRICT MEDICAL SOCIETY

Meetings are held on the second Tuesdays of March and May at the Weldon Hotel, Greenfield, at 11 A.M.

CHARLES MOLINE, M.D., Secretary.
Sunderland.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

Meetings to be held at the Bear Hill Golf Club, Stoneham, at 12:15 P.M.

March 11, May 6.

K. L. MACLACHLAN, M.D., Secretary.
1 Bellevue Avenue, Melrose.

NORFOLK DISTRICT MEDICAL SOCIETY

February 25—See page 398.

March 31—Hotel Kenmore, at 8 P.M. Dr. Benedict F. Boland—Cauterization of the Cervix Uteri Using Various Electrical Methods. Illustrated with lantern slides.

May—Annual Meeting. (Place, date and subject to be announced.)

The censors meet for the examination of candidates: May 7, 1936; November 5, 1936.

FRANK S. CRUICKSHANK, M.D., Secretary.
1236 Beacon Street, Brookline.

PLYMOUTH DISTRICT MEDICAL SOCIETY

March 19—Plymouth County Sanatorium, South Hanson.

April 16—Brockton Hospital.

May 21—Lakeville State Sanatorium.

G. A. MOORE, M.D., Secretary.
167 Newbury Street, Brockton.

SUFFOLK DISTRICT MEDICAL SOCIETY

March 18—Meeting at the Boston Medical Library. The Laboratory and Clinical Story of Fatigue, Dr. Arlie V. Bock and Dr. David B. Dill. Discussion: Dr. Donald J. MacPherson and Dr. Augustus Thorndike, Jr.

April 29—Annual Meeting at the Boston Medical Library. The Treatment of Septicaemia, Dr. Champ Lyons. The Plurality of Scarlatinal Streptococcus Toxin, Dr. Sanford B. Hooker. Discussion: Dr. Hans Zinsser.

The medical profession is cordially invited to attend these meetings.

ROBERT L. DeNORMANDIE, M.D., President,
CHARLES C. LUND, M.D., Secretary.

WORCESTER DISTRICT MEDICAL SOCIETY

March 11—Wednesday evening. Memorial Hospital, Worcester, Mass. Dinner and scientific program. Subjects of program to be announced later.

April 8—Wednesday evening. Hahnemann Hospital, Worcester, Mass. Dinner and scientific program. Subjects of program to be announced later.

May 13—Wednesday afternoon and evening. Annual Meeting of Society. Time, place and details of program to be announced in an April issue of the Journal.

ERWIN C. MILLER, M.D., Secretary.
27 Elm Street, Worcester.

BOOK REVIEWS

The Diagnosis and Treatment of Pulmonary Tuberculosis.* A handbook for practitioners; a textbook for students, nurses and social workers. John B. Hawes, 2nd, and Moses J. Stone. 211 pp. Philadelphia: Lea & Febiger. $2.75.

In this book of 211 small pages the authors have concentrated twenty-five years' experience in the handling of patients with pulmonary tuberculosis. The book is in outline form with summaries at the end of many chapters. The points are clearly made. The attitude is conservative. One does not agree with all the conclusions, but in general they represent the opinion of the best authorities on present-day treatment of tuberculosis.

The work is entitled A Handbook for Practitioners; A Text-Book for Students, Nurses and Social Workers. This seems too big an order for so small a book. It is not sufficiently complete to answer the questions which are constantly raised by medical students and practitioners. On the other hand, it is not sufficiently elementary to cover the needs of nurses and social workers. Be that as it may, all men interested in tuberculosis work will welcome so concise a statement of the opinions of these outstanding authorities on this important subject.

*See page v, Advertising Section.

The Doctor and the Public. A study of the sociology, economics, ethics, and philosophy of medicine, based on medical history. James Peter Warbasse. 572 pp. New York: Paul B. Hoeber, Inc. $5.00.

This very readable account of medical history and certain aspects of modern medicine will bring to a wider group the skill in exposition and the facility of expression long known to those who have come in contact with Dr. Warbasse. To compass within less than six hundred pages an account of the development of medicine up to the present day, combined with an analysis of present-day problems, is no light task, and yet it has been met well by the author. The analysis of the present-day social problems is keen though not exhaustive. While presenting for consideration the various forms of health insurance and social methods of health protection, the author does not try to compel the acceptance of any panacea. Instead he notes the resistance against change and emphasizes the need of the medical profession's planning its own course. And he says, "The change the people will make is apt to be the easiest one—to leave it all to the State." "It is better to have new ideas, to institute new methods, and to change the events, than it is to let the events change themselves, force alien ideas upon our minds, and impose upon us methods not of our own desire."

In the final section of the book, Dr. Warbasse presents a swallowing of the individual physician by the institution. Here again he makes two statements that may well cause us to consider carefully the direction in which we are drifting: "The people have no creative ability. The masses have only destructive power. Every new idea comes from an individual. Society approves or disapproves, but it creates nothing."

International Clinics. Volume III. Forty-Fifth Series, 1935. Edited by Louis Hamman. 337 pp. Philadelphia, Montreal and London: J. B. Lippincott Company.

That this series is fast becoming recognized as one of the leading American quarterly reviews is well evidenced by the calibre of this volume. The opportunity for greater length allows for more amplification than is permissible in the current literature. The merit of such reviews is apparent to general practitioners and specialists in the major branches.

There is a summary of the recent knowledge regarding idiopathic hypochromic anemia and allergy in migraine. We find a review of rheumatoid arthritis and the value of the various renal function tests.

A reorientation regarding the indications for cholecystectomy leads the surgical section followed by articles on brain injury and intestinal obstruction problems.

The remaining articles are all equally interesting. The reviewer believes that a cheaper paper edition making for greater distribution should be considered by the publishers.